

State of Alaska
Department of Health and Social Services
Emergency Operations Plan

Annex J: Pandemic Influenza Plan

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Annex Approved By:


Signature

Joseph McLaughlin, MD, MPH

Printed Name


Signature

Anne Zink, MD

Printed Name

1/30/20
Date

State Epidemiologist
Title

1/30/2020
Date

Chief Medical Officer
Title

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“The total number of Alaskans who were stricken by Spanish influenza between October 1918 and April 1919 is beyond the reach of any but the wildest kind of speculation.”

-- America's Forgotten Pandemic: The influenza of 1918¹
Alfred W. Crosby, 1989

Purpose

It is highly likely that the world will face another pandemic caused by a novel strain of influenza virus. Because novel influenza viruses have the potential to spread rapidly and cause severe illness, the effects of a pandemic could be devastating. In addition to excessive morbidity and mortality, an overwhelmed healthcare system and high levels of absenteeism in the workforce could disrupt essential services, local and national economies, and have lingering societal effects.

No one can predict when the next influenza pandemic will occur or where it will emerge. The State of Alaska must ensure effective response capabilities to address a pandemic threat. The Alaska Pandemic Influenza Plan addresses the need for preparedness, response, and recovery planning in preparation for a potential future pandemic.

The purpose of this plan is the following:

- To provide guidance that aims to reduce morbidity and mortality, which will in turn preserve continuity of essential government functions, and minimize the social and economic impact of an influenza pandemic in Alaska.
- To define general roles, responsibilities, and actions of key stakeholders during an influenza pandemic.
- To serve as a guide for local health care partners, response agencies, and other stakeholders in the development of local pandemic influenza response plans.

Situation

The 1918 influenza pandemic devastated parts of Alaska.² With one of the highest mortality rates in the world,³ entire villages in Alaska died during the pandemic.⁴ Although there is no way to fully predict the impact of another influenza pandemic on Alaskans, the Centers for Disease Control and Prevention (CDC) has developed software, called FluAid, to assist local pandemic planners in establishing a range of estimates of impact in terms of deaths, hospitalizations, and outpatient visits due to a future pandemic influenza strain circulating in their community (Table 1). The software can be found at the following web link: <http://www.cdc.gov/flu/pandemic-resources/tools/fluaid.htm>.

Table 1. Alaskans affected by pandemic influenza based on Health and Human Services estimates.

| HHS Estimates of Percent of Population Affected by Next Pandemic | Number Affected in Alaska (Pop. 737,000) | Number Affected in Your Community (Pop. 350,000) | Number Affected in Your Community (Pop. 80,000) | Number Affected in Your Community (Pop. 5,000) |
|---|---|---|--|---|
| Up to 30% of pop. will become ill with flu | 221,100 | 105,000 | 24,000 | 1,500 |
| Up to 15% of pop. will require outpatient visits | 110,550 | 52,500 | 12,000 | 750 |
| Up to 0.3% of pop. will require hospitalization | 2,210 | 1,050 | 240 | 15 |
| Up to 0.1% of pop. will die of flu-related causes | 740 | 350 | 80 | 5 |

Assumptions

This plan was created under the following assumptions:

- The strain of influenza that will cause the next influenza pandemic, its pathogenicity and transmissibility, and the time and place of emergence cannot be determined in advance.
- The identification of a novel influenza virus with sustained human-to-human spread may give warning of a pandemic weeks or months before the first cases are identified in Alaska.
- Implementation of layered social distancing measures may help to slow the spread of influenza early in the pandemic period.
- An influenza vaccine will not be available for the pandemic strain early in the course of the pandemic. When a vaccine becomes available, it will most likely be on allocation and may require two doses.
- Supplies of antiviral medications that are effective against influenza will be in high demand and shortages will likely follow, thus creating a need to establish priority utilization.
- Communities across the state may be impacted simultaneously.
- The number of ill people requiring outpatient medical care and hospitalization could overwhelm the state's health care system, including but not limited to personnel shortages due to illness, absenteeism, family responsibilities, and exhaustion.
- There could be significant disruption of public and privately owned critical infrastructure.

- Maintaining social order and compliance with health recommendations during a pandemic may be problematic. Communication is critical.
- Alaska may be unable to rely on resources from other states, the Federal government, or Canada based on the severity and spread of the pandemic.
- Federal and State declarations of emergency may change legal and regulatory aspects of providing public health services during a pandemic.
- Updating, exercising, and executing this plan in collaboration with tribal health organizations will be crucial in assuring adequate medical care and supplies to remote villages.
- The State will activate the *State of Alaska Department of Health and Social Services (DHSS) Emergency Operation Plan (EOP)*.⁵

Structure of the Plan

The first Alaska Pandemic Influenza Plan was published in March 2005. Updates to the Alaska Pandemic Influenza Plan were made as new guidance became available. The Alaska Pandemic Influenza Plan is an annex to the *DHSS EOP*.⁵

The Alaska Pandemic Influenza Plan describes the progression of an influenza pandemic; roles of State and Federal agencies, including command, control, and management procedures; and specific information on the eight key pandemic preparedness and response domains outlined in the CDC publication, “Updated Preparedness and Response Framework for Influenza Pandemics.”⁶

The eight key pandemic preparedness and response domains are:

- Incident Management
- Surveillance and Epidemiology
- Laboratory
- Community Mitigation
- Medical Care and Countermeasures
- Vaccine
- Risk Communication
- State/Local Coordination

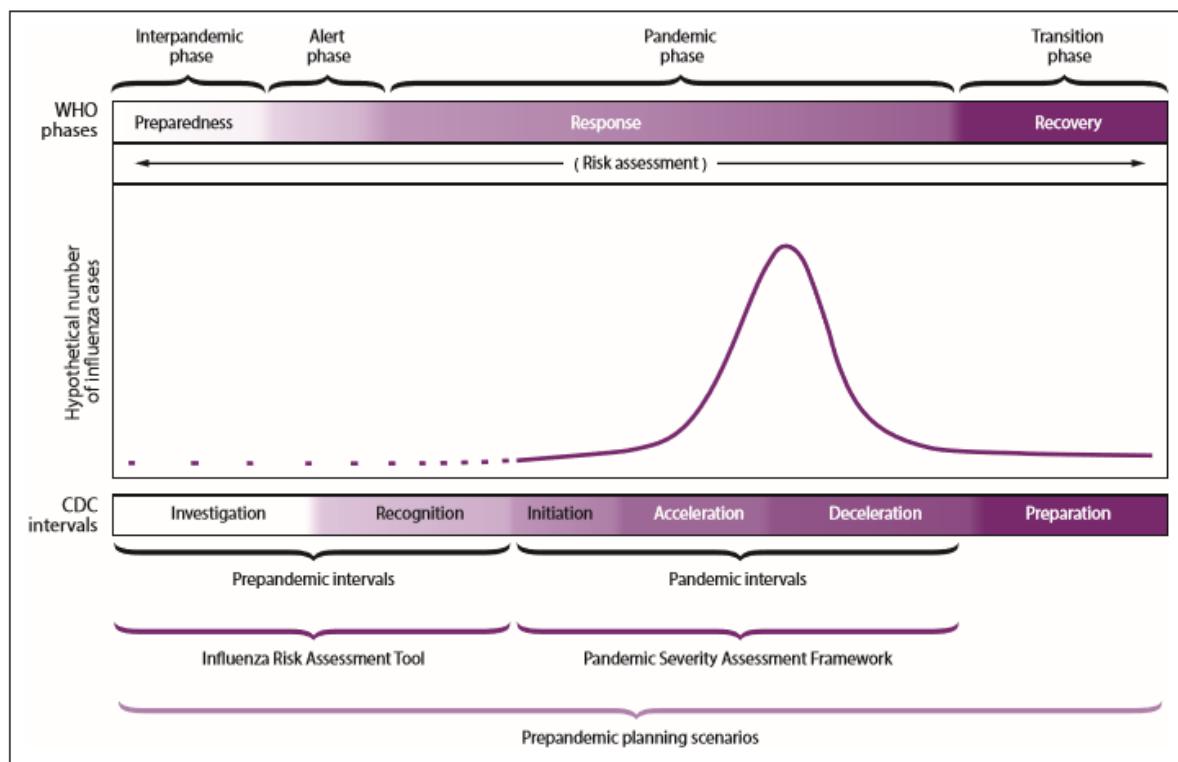
Vulnerable populations (for example, children, the homeless, and those with functional and access needs) are discussed, as are public health ethics.

Influenza Pandemic Intervals, CDC

The CDC describes the progression of an influenza pandemic using six intervals (see Figure 1). These points of reference are in addition to the World Health Organization's (WHO) pandemic phases,⁷ which were used in previous iterations of the Alaska Pandemic Influenza Plan.

The 2019 Alaska Pandemic Influenza Plan uses the CDC intervals as a framework for pandemic influenza planning. Progression through the intervals may not always be linear and response efforts will need to be modified accordingly.

Figure 1. Preparedness and response framework for novel influenza A virus pandemics, with CDC intervals and WHO phases.⁸



Source: Adapted from: Holloway R, Rasmussen SA, Zaza S, Cox NJ, Jernigan DB; Influenza Pandemic Framework Workgroup. Updated preparedness and response framework for influenza pandemics. MMWR Recomm Rep 2014;63(No. RR-6).

Prepandemic Intervals

Investigation of novel influenza A infection in humans or animals

State indicator: Identification of novel influenza A infection in humans or animals in the United States with potential implications for human health

Recognition of increased potential for ongoing transmission of a novel influenza A virus

State indicator: Increasing number of human cases or clusters of novel influenza A infection in the United States with virus characteristics indicating increased potential for ongoing human-to-human transmission

Pandemic Intervals

Initiation: Initiation of a pandemic wave

State indicator: Confirmation of human cases of a pandemic influenza virus in the United States with demonstrated efficient and sustained human-to-human transmission

Acceleration: Acceleration of a pandemic wave

State indicator: Consistently increasing rate of pandemic influenza cases identified in the state, indicating established transmission

Deceleration: Deceleration of a pandemic wave

State indicator: Consistently decreasing rate of pandemic influenza cases in the state

Preparation: Preparation for future pandemic waves

State indicator: Low pandemic influenza activity but continued outbreaks possible in the state

Concept of Operations

General response activities (e.g., activation of the DHSS Emergency Operation Center (EOC) and Incident Command System) are not included in the Alaska Pandemic Influenza Plan as the information exists in other Alaska emergency plans.^{5,9}

State and Federal roles specific to pandemic influenza are outlined below. A general overview of pandemic response domains is also included below. In the “Updated Preparedness and Response Framework for Influenza Pandemics,” specific response elements are outlined by interval;⁶ the elements are included in Supplement A. Leveraging systems in place to prevent, respond to, and control seasonal influenza will be critical when responding to a pandemic.

State Roles

Alaska Administrative Order No. 228, January 9, 2006, orders the Department of Military and Veterans Affairs, Division of Homeland Security and Emergency Management (DHS&EM) to assume overall responsibility for interagency coordination of pandemic influenza preparedness, and the DHSS to assume primary functional and technical responsibility for pandemic influenza preparedness.

Department of Health and Social Services

- Maintain the Alaska Pandemic Influenza Plan as an annex to the *DHSS EOP*.⁵
- In conjunction with DHS&EM, develop key domains of pandemic influenza preparedness and response.
- Integrate pandemic influenza planning with other planning and preparedness response activities conducted under CDC and Public Health Emergency Preparedness (PHEP) cooperative agreements with the State of Alaska.
- Activate the DHSS EOC.
- In conjunction with DHS&EM, maintain an interagency incident management team.
- Lead technical and operational response activities relevant to public health.
- Coordinate with the Division of Behavioral Health for disaster behavioral health provisions.
- Identify data management systems needed to implement components of the plan and develop new systems as necessary.
- Coordinate with the Alaska Native Tribal Health Consortium and other tribal health organizations to ensure equitable delivery of medications, vaccine, and other health services to their patients.
- Coordinate with the Municipality of Anchorage and other local communities to support development and exercising of local plans and provide technical assistance as requested.
- Coordinate response with adjoining jurisdictions of British Columbia, Yukon Territory, and Washington State.
- Identify public and private sector partners needed for effective planning and response.

Department of Military and Veterans Affairs, Division of Homeland Security and Emergency Management, State Emergency Operations Center

- In consultation with DHSS, evaluate infectious disease outbreak and determine appropriate implementation of the *State of Alaska EOP (SOA-EOP)*⁹ and staffing of the State Emergency Operations Center (SEOC).
- Provide overall interagency coordination and local community support for pandemic influenza response in accordance with the *SOA-EOP*.

Department of Environmental Conservation

- Lead all animal health activities related to pandemic influenza.
- Conduct enhanced surveillance of both domestic animals and wildlife in collaboration with Alaska Department of Fish and Game, and both United States Department of Agriculture-Wildlife Services and the United States Fish and Wildlife Service.

- Participate in outreach to animal owners and individuals working with or handling animals (e.g., 4-H; farmers; pet owners; livestock haulers; personnel at animal exhibitions, including zoos and petting zoos; animal control facilities; wildlife rehabilitation centers; slaughter facility workers).
- Distribute signage for use at animal exhibitions and state fairs.

Department of Education & Early Development

- Assist with decision making regarding discontinuation or closure of schools, a responsibility of superintendents outlined in Alaska Regulation 4 AAC 05.090(e).
- Maintain/update the Flu Memo to Superintendents.
- Distribute information and communicate with districts to keep schools apprised of influenza outbreak updates and response recommendations issued by DHSS and/or the CDC.

Note that response actions are based upon the concept that emergency operations begin at the tribal, local, city, or borough level. Local emergency and health officials know the most effective way to apply emergency response resources within their communities. Local health services will respond in accordance with their jurisdictional plans. State assistance will be provided upon request when emergency or disaster needs exceed local capabilities. The State, when asked to assist, will work in coordination with local officials.

Federal Roles

An influenza pandemic will represent a national health emergency requiring a coordinated response. As outlined in Homeland Security Presidential Directive 5, the Department of Homeland Security has the primary responsibility for coordinating domestic incident management and will coordinate all non-medical support and response actions across all federal departments and agencies. The directive can be found at:

<https://www.dhs.gov/sites/default/files/publications/Homeland%20Security%20Presidential%20Directive%205.pdf>

The U.S. Department of Health and Human Services (HHS) will coordinate the overall public health and medical emergency response efforts across all federal departments and agencies. Authorities exist under the Public Health Service Act for the HHS Secretary to declare a public health emergency and to coordinate response functions.

The President can declare an emergency and activate the National Response Framework, in accordance with the Stafford Act, under which HHS has lead authority for Emergency Support Function #8 (ESF8) Public Health and Medical Services.

Under ESF8, the Secretary of HHS shall assume operational control of Federal emergency public health and medical response assets, as necessary, in the event of a public health emergency, except for members of the Armed Forces, who remain under the authority and control of the Secretary of Defense.

The Secretary of HHS, through the Office of the Assistant Secretary for Preparedness and Response, coordinates national ESF8 preparedness, response, and recovery actions. These actions do not alter or impede the existing authorities of any department or agency supporting ESF8.

HHS agencies will coordinate activities in their areas of expertise. Chartered advisory committees will provide recommendations and advice. Expert reviews and guidance also may be obtained from committees established by the National Academy of Sciences, Institute of Medicine, or in other forums.

Additional information on federal involvement can be found in the HHS Pandemic Influenza Medical Countermeasures—Amendment (www.federalregister.gov/documents/2015/12/09/2015-31087/pandemic-influenza-medical-countermeasures-amendment).

Command, Control, and Management Procedures

Existing command and control system structures will be applicable.⁵ The Alaska Pandemic Influenza Response Plan describes responsibilities and activities associated with response elements directly related to pandemic influenza.

The DHSS EOC may be activated by either the Director of the Alaska Division of Public Health (DPH) or the Section Chief of Rural and Community Health Systems (RCHS) in consultation with either the Commissioner or the Commissioner's delegate. The plan will need to be adapted to reflect circumstances and situations as they arise.

Integration and coordination of plans across jurisdictions is critical to assure effective implementation of response activities. Guidance from CDC explicitly outlines actions for state and local agencies to take during each pandemic interval (Supplement A).⁶

Key Pandemic Response Domains

Incident Management

Lead State Agencies: Division of Public Health – Section of Rural and Community Health Systems and the Division of Homeland Security and Emergency Management

Public health incident management is generally based on the Incident Command System – a flexible, unified system that provides a framework for diverse agencies and organizations to work together. The DHS&EM SEOC will provide overall interagency coordination and local community support for pandemic influenza response in accordance with the *SOA-EOP*,⁹ while the Health Emergency Response Operations (HERO) in the RCHS will develop plans, coordinate with health-associated partners, conduct training and exercises, and distribute grant funds (as available) to eligible healthcare facilities for pandemic influenza preparedness activities. The HERO unit manages the DHSS EOC and would be responsible for activating it during a pandemic and serve as the Health Branch in a SEOC response according to the *SOA-EOP*.⁹ They would play a critical role in declaring the pandemic in the state, monitoring the effectiveness of response activities, planning deactivation, and preparing for future waves.

Surveillance and Epidemiology

Lead State Agency: Division of Public Health – Section of Epidemiology

Epidemiologic surveillance for influenza will help inform response activities in Alaska. During an influenza pandemic, maintaining or strengthening Alaska’s existing influenza surveillance activities (Supplement B), and developing new surveillance strategies (for example, expanding the number of existing sentinel surveillance sites and improving school absenteeism reporting) will be critical. Surveillance strategies may need to change over the course of the pandemic and Section of Epidemiology (SOE) staff should work with federal partners to identify and implement specific strategies.

Laboratory

Lead State Agency: Division of Public Health – Virology Unit of the Alaska State Section of Laboratories

In addition to epidemiological surveillance, laboratory-based influenza surveillance and analyses will be critical for characterizing the pandemic in the state and for informing response activities. The Virology Unit of the Alaska State Section of Laboratories (ASVL) will work with CDC to identify priority actions. See Supplement C for additional information.

Community Mitigation

Lead State Agency: Division of Public Health – Section of Epidemiology and Section of Rural and Community Health Systems

Implementation of nonpharmaceutical interventions (NPIs) to decrease the spread of influenza may reduce the number of people infected early in the course of the outbreak, before vaccines are available for prevention. In a pandemic, recommended NPIs may include recommendations that exceed everyday suggestions for minimizing influenza transmission; they could include social distancing strategies, voluntary quarantine, and a recommendation that ill individuals use a face mask in public.⁸ Use of these and other interventions in Alaska should be based upon the epidemiology of the pandemic and recommendations from federal and international authorities. Timely communication to the public will be absolutely critical to the success of any nonpharmaceutical interventions. See Supplement D for additional information.

Medical Care and Countermeasures

Lead State Agency: Division of Public Health – Section of Rural and Community Health Systems and Section of Epidemiology

Education for healthcare providers including diagnostic methods, infection prevention and control measures, and treatment and chemoprophylaxis recommendations will be required during an influenza

pandemic. Additionally, there will be ongoing monitoring of the need for surge resources, including medical supplies, healthcare providers, and implementation of the State's Mass Fatality Plan (Annex H of the *DHSS EOP*⁵). Identification of back-up personnel and volunteers (including those registered with Alaska Respond) will also be critical, as will possibly establishing alternate care sites and overflow locations. Working through the Alaska Statewide Healthcare Coalition should be considered.

Antiviral medications may play an important role for the control and prevention of influenza. Recommendations for use of antivirals may be updated based on current epidemiologic and laboratory data, and the availability of a pandemic influenza vaccine. State-based planning for antiviral use should include obtaining antiviral drugs from national, state, and local stockpiles. Decisions regarding antiviral distribution to priority groups; data collection on drug use, drug-related adverse events (<https://www.fda.gov/Safety/MedWatch/default.htm>), and drug resistance; coordination with bordering jurisdictions; legal preparedness; and dissemination of public health information will be needed. See Supplement E for additional information. More information about medical countermeasures, including antivirals, can be found in Annex F of the *DHSS EOP*.⁵

Vaccine

Lead State Agency: Division of Public Health – Section of Epidemiology

Vaccine for the influenza virus causing the pandemic is unlikely to be available early in the pandemic. When vaccine does become available, the introduction of it is likely to be incremental. Distribution and use of the pandemic influenza vaccine will likely differ from that of seasonal influenza vaccine; availability of the pandemic influenza vaccine likely will be low, especially at the beginning of the pandemic (current manufacturing procedures require 3–6 months before large amounts of vaccine are available for distribution), and there may be greater demand. Planning by public health officials is needed to assure optimal use of available vaccine, whether from national stockpiles, state stockpiles, or private sector inventories.

A final decision regarding the amount of pandemic influenza vaccine that will be purchased may not be made until the vaccine is being actively produced. Plans for delivery and administration of vaccine should address possible scenarios including complete federal purchase and distribution to states, partial federal purchase with distribution to states, and minimal federal purchase (similar to the annual influenza vaccination program). More information about medical countermeasures, including vaccines, can be found in Annex F of the *DHSS EOP*.⁵

Given the magnitude of the vaccination effort during a pandemic, plans need to encompass both private and public sectors. Coordination with the private sector is an important aspect of planning. Because of the anticipated vaccine shortage, priority groups for vaccination will likely be identified (Supplement F). As information about the impact of the novel virus becomes available, recommendations will be formulated at the national level, though these may need to be adjusted at the state level depending on local factors. The need to prioritize vaccine use will require substantial public education and adequate security measures.

Very early in a pandemic, efforts to increase pneumococcal vaccination that can reduce the incidence of invasive pneumococcal disease secondary to influenza may be considered.

Risk Communication

Lead State Agency: Department of Health and Social Services Public Information Officers in coordination with the Joint Information Center at the State Emergency Operations Center

Providing timely information to the public, healthcare providers, local authorities, community leaders, and the media is critical. In particular, communication to the public regarding NPIs must be excellent. Development of accurate and timely messages informing residents about the availability of vaccine and the rationale for vaccine priority groups will also be key. Using “Crisis and Emergency Risk Communication” principles will help ensure that communications are effective.

It is anticipated that CDC will make communication materials on key response elements available before and during an influenza pandemic. The Joint Information Center will be responsible for tracking these materials and distributing them (as is or after Alaska-specific modification). Details of the Risk Communication Plan covering essential activities are located in Annex B of the *DHSS EOP*.⁵

State and Local Coordination

Lead State Agency: Division of Homeland Security and Emergency Management, State Emergency Operations Center

The SEOC will coordinate the overall state response and prioritize state response resources. In a pandemic influenza incident, coordination actions by SEOC may include:

- Communication with local communities.
- Deploying Incident Management Teams to local communities or geographical areas.
- Support for public information, local, state and federal declarations of disaster.
- Coordination of Alaska National Guard and Title 10 military resources.
- Support for site security, isolation quarantines, evacuations, and transportation closures.
- Support for patient movement, casualty distribution, and fatality management.
- Ordering, sourcing, and facilitating response of required resources to include those through the Emergency Management Assistance Compact.
- Participation in Unified Command with DHSS.

Vulnerable populations

The State EOP provides guidance on meeting the needs of vulnerable populations during an emergency response.⁸ When responding to pandemic influenza, the state must ensure that the support required by those with functional and access needs is provided. Persons may have communication, medical, independence, supervision, and/or transportation needs. They may include people with disabilities, people who live in institutionalized settings, the elderly, children, people from diverse cultures, people with limited English proficiency/non-English speakers, and people who are transportation-disadvantaged. Guidance on reaching vulnerable populations can be found at:

<https://emergency.cdc.gov/workbook/index.asp>. Because of Alaska's Vaccines for Children program, providers across the state are in contact with families experiencing economic hardship who have children <19 years of age. This will help to ensure that these families are not neglected during the response and should be taken advantage of during the response.

Medical ethics

Antiviral and vaccine prioritization must be based on accepted standards and communicated clearly to the public. Crisis standards of care, if required, must be based on accepted practices. When setting up a surveillance system for pandemic influenza, laws on surveillance, data collection, storage and reporting, and patients' confidentiality must be followed. Additionally, standard laws of consent will be followed. Should exigent circumstances require deviation from normal policies and procedures, this must be transparent and explained clearly.

Please note that in addition to the Supplements referenced above, additional information on Alaska's pandemic influenza notification protocol is presented in Supplement G, and additional planning resources are identified in Supplement H.

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Supplements

The following supplements provide further guidance regarding the implementation of the Pandemic Influenza Plan:

- A. CDC Intervals for a Novel Influenza A Virus Pandemic: State/Local and Federal Indicators, Decisions, and Actions
- B. Enhanced Surveillance
- C. Specimen Collection and Laboratory Testing
- D. Nonpharmaceutical Interventions
- E. Antiviral Management
- F. Vaccine Management
- G. Pandemic Influenza Notification Protocol
- H. Planning Resources

Supplement A: CDC Intervals for a Novel Influenza A Virus Pandemic: State/Local and Federal Indicators, Decisions, and Actions⁶

Recommendations and Reports

Appendix

CDC Intervals for a Novel Influenza A Virus Pandemic: State/Local and Federal Indicators, Decisions, and Actions

The following tables provide a list of some key decisions and potential actions to consider in response to the spread of a novel influenza virus capable of causing a worldwide pandemic. Specific decisions and actions might be triggered as each jurisdiction moves from one interval to another. For many interventions and activities, federal, state, and local preparedness and response actions begun during one interval should be continued and enhanced during subsequent intervals. Because predicting how a particular virus will spread is exceedingly difficult, the examples that follow might need to be scaled back or otherwise modified so that responses are proportionate to the threat. The following tables are not meant to be prescriptive or comprehensive but rather to provide

examples of priority issues that should be addressed during each interval.

Planning for many of the actions suggested in the tables that follow should be part of ongoing pandemic preparedness programs at the federal, state, and local levels. This document assumes that previous pandemic planning has occurred in each jurisdiction; these plans should be reviewed, updated, and adapted to fit the characteristics of the emerging threat. Pandemic planning is based on numerous assumptions and actions that should be continuously reassessed as the pandemic progresses. The circumstances of each situation dictate the timing of decisions and actions.

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Investigation Interval (Table 1)

State/Local indicator: Identification of novel influenza A infection in humans or animals in the United States with potential implications for human health.

Federal indicator: Identification of novel influenza A infection in humans or animals anywhere in the world with potential implications for human health.

TABLE 1. Novel Influenza A virus pandemic (Investigation Interval): Investigation of novel Influenza A Infection In humans or animals

| Domain | State/Local | Federal |
|-------------------------------|---|---|
| Incident management | <ul style="list-style-type: none"> Review state/local response plans. Coordinate activities and response plans with state animal health officials, as appropriate. Review and exercise all aspects of influenza response. | <ul style="list-style-type: none"> CDC and the World Health Organization (WHO) convene International experts to implement the Influenza Risk Assessment Tool* to assess the risk for emergence of the novel virus, as well as the potential impact of the virus. If the United States is affected, report human cases to WHO (per the 2005 International Health Regulations). If the United States is affected, report animal cases to the World Organization for Animal Health (OIE) as required by OIE standards. Identify priority preparedness activities and accelerate progress. Consider activation of emergency operations centers. |
| Surveillance and epidemiology | <ul style="list-style-type: none"> Maintain and enhance influenza and respiratory virus surveillance systems as needed. Implement case-based investigation of novel influenza infections in humans and animals. Assess contacts of ill persons to determine human-to-human transmission and risk factors for infection. Report cases according to the Nationally Notifiable Diseases Surveillance System. If only animal cases are identified, assess human exposures and risks for infection.[†] Coordinate activities with state animal health representatives as appropriate. Identify whether state or federal assistance is required to support surveillance systems, field investigation, laboratory, and animal control resources. | <ul style="list-style-type: none"> Support international investigation efforts. If the United States is affected, support state and local investigation efforts. Coordinate activities with animal health officials. Maintain and enhance national surveillance for animal and human cases as needed. Update guidance for surveillance measures as relevant to the situation. |
| Laboratory | <ul style="list-style-type: none"> Assess and optimize laboratory capacity to detect and characterize influenza cases. Coordinate activities with state/local veterinary diagnostic laboratories. Share viruses with CDC and the U.S. Department of Agriculture (USDA). Identify whether state or federal assistance is required to support laboratory activities. | <ul style="list-style-type: none"> Support international efforts to characterize the virus, including antiviral resistance profiles. If the United States is affected, conduct laboratory confirmation of cases and monitor virus for transmission characteristics and resistance. Develop and distribute test kits to states and other countries if indicated. Identify genetic and antigenic relationship of virus to available vaccine candidates and to stockpiled vaccine. Initiate actions to isolate virus; prepare candidate vaccine viruses for use in vaccine development. Update select agent regulations and biosafety guidelines as appropriate for the situation. |
| Community mitigation | <ul style="list-style-type: none"> Emphasize the importance of personal protective measures (e.g., voluntary isolation by staying home when ill, respiratory etiquette, and hand hygiene) in limiting spread of influenza. If human-to-human transmission is suspected, consider recommending isolation of ill persons and voluntary quarantine of close contacts (e.g., household members). Enhance all usual influenza pandemic preparedness activities with schools and businesses. | <ul style="list-style-type: none"> Promote community mitigation preparedness activities, especially voluntary home isolation of ill persons, respiratory etiquette, hand hygiene, and infection control. Review all guidance documents and update as needed for the situation (e.g., recommendations on community mitigation measures and other nonpharmaceutical interventions designed to slow the spread of the virus in the community or within certain populations and settings at high risk for infection). Provide guidance for border health and travelers' health activities as appropriate for the situation. Evaluate the need to implement border controls, travel advisories, or both; conduct travel volume and pattern analyses. |

See table footnotes on page 12.

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TABLE 1. (Continued) Novel Influenza A virus pandemic (Investigation Interval): Investigation of novel Influenza A infection in humans or animals

| Domain | State/Local | Federal |
|----------------------------------|---|--|
| Medical care and countermeasures | <ul style="list-style-type: none"> Advise health-care providers statewide to promptly diagnose Influenza and promptly treat ill persons. Based on current recommendations, implement infection-control practices; distribute health advisory notices with information on case definitions and infection-control measures to hospitals and outpatient care centers. If human-to-human transmission is suspected, monitor and assist with early access to postexposure chemoprophylaxis for case contacts per current recommendations. Review all guidance documents, update as needed for the situation, and communicate with key stakeholders. Conduct all usual Influenza pandemic preparedness activities with health-care facilities. | <ul style="list-style-type: none"> Review all guidance documents and update as needed for the situation (e.g., comprehensive medical care and countermeasure guidance for policy makers, clinicians, health-care organizations, employers, and public health); disseminate guidance for diagnosis and treatment of ill persons and infection-control measures to states and professional organizations. Consider which immediate steps are needed to establish medical countermeasure stockpiles (e.g., antivirals, respiratory protective devices, ventilators, and Emergency Use Authorizations). |
| Vaccine | <ul style="list-style-type: none"> Evaluate all usual Influenza pandemic preparedness activities, including a review and update of vaccine distribution and administration plans, process for rapid contract negotiation and staffing, mechanisms to identify and provide vaccine and document vaccination for critical infrastructure personnel and other possible priority groups for vaccination, and plans and staffing for mass vaccination clinics and points of dispensing. Review all guidance documents, update as needed for the situation, and communicate to key stakeholders. | <ul style="list-style-type: none"> Evaluate whether findings from the Influenza Risk Assessment Tool and other information support initiation of development of vaccine candidates, manufacturing, vaccine stockpiling, or all of these. Evaluate capability to make pandemic vaccine available with federal agencies and industry partners (e.g., activation of plans to develop, manufacture, and clinically evaluate pandemic vaccine). Review all guidance documents, and update as needed using available data (e.g., vaccine allocation, distribution, prioritization, and administration, including monitoring vaccine adverse events). Evaluate local and state preparedness level for a large vaccination campaign. |
| Risk communication | <ul style="list-style-type: none"> Frequently update clinicians and veterinarians through the state health alert network. Share information with key federal and local partners, such as animal and human health public affairs officers and other agencies or organizations. Disseminate timely and relevant messages to the public as appropriate. Work with CDC, USDA, and the Food and Drug Administration (FDA) to disseminate messages regarding food safety concerns as appropriate. | <ul style="list-style-type: none"> Disseminate relevant and timely messages in coordination with other key partner audiences, including local and federal agencies, the National Public Health Information Coalition, and USDA. Work with FDA and USDA to disseminate messages regarding food safety concerns as appropriate. |
| State/Local coordination | <ul style="list-style-type: none"> Determine whether state or federal assistance is required to support review and update of response plans. Provide technical assistance as appropriate to regional and local partners for reviewing plans, guidance, and communication channels. | <ul style="list-style-type: none"> Provide technical assistance as appropriate for state, local, tribal, and territorial (SLTT) partners for reviewing and updating plans. Facilitate effective and timely movement of information, providing open communication between federal and SLTT agencies and partners. Evaluate the state and local preparedness level to respond to a potential pandemic, including methods to receive funds and use funds rapidly. |

* Source: Trock SC, Burke SA, Cox NJ. Development of an Influenza virologic risk assessment tool. *Avian Dis* 2012;56:1058–61.

† Source: CDC. Novel Influenza A virus Infections. 2014 case definition. CSTE Position Statement 13-ID-14. Atlanta, GA: CDC; 2014. Available at <http://www.cdc.gov/NNDSS/script/casedef.aspx?CondYrID=949&DatePub=1/1/2014%2000:00%20AM>.

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Recognition Interval (Table 2)

State/Local indicator: Increasing number of human cases or clusters of novel influenza A infection in the United States with virus characteristics indicating increased potential for ongoing human-to-human transmission.

Federal indicator: Increasing number of human cases or clusters of novel influenza A infection anywhere in the world with virus characteristics indicating increased potential for ongoing human-to-human transmission.

Unaffected states should continue preparation efforts.

TABLE 2. Novel Influenza A virus pandemic (recognition interval): recognition of increased potential for ongoing transmission

| Domain | State/Local | Federal |
|-------------------------------|---|---|
| Incident management | <ul style="list-style-type: none"> Continue or initiate actions described for the Investigation Interval for all domains. Consider activation of the state/local emergency operations center. Forecast future resource needs for a potential response. | <ul style="list-style-type: none"> Continue or initiate actions described for the Investigation Interval for all domains. Review all decisions previously made during the Investigation Interval to ensure they continue to be relevant to the emerging situation. Repeat the Influenza Risk Assessment Tool, as indicated by new findings, to assess risk for emergence of the novel virus, as well as the potential impact. Formulate and prioritize research needs (e.g., scientific preparedness). Forecast future resource needs for a potential response. Consider using the Pandemic Severity Assessment Framework* if sufficient data are available. Convene group of U.S. Department of Health and Human Services leaders regularly to address policy issues and make national-level policy decisions; expand interagency and intergovernmental coordination. Consider determination of a potential public health emergency. Consider activation of emergency operations centers. |
| Surveillance and epidemiology | <ul style="list-style-type: none"> Conduct enhanced novel Influenza A surveillance. Continue case-based investigation and control using standard methods. Report cases according to the Nationally Notifiable Diseases Surveillance System. If animal cases are identified, expand implementation of joint investigation plan with state agriculture officials. | <ul style="list-style-type: none"> Conduct enhanced novel Influenza A surveillance for cases nationwide. Refine criteria for reporting and investigating cases. Provide technical assistance as needed. Evaluate the need for border controls for animals or products if appropriate. Consider whether use of a vaccine for animals is an acceptable option. |
| Laboratory | <ul style="list-style-type: none"> Confirm all suspected cases at a public health laboratory. Prepare specimen triage plans and implement surge plans if needed. | <ul style="list-style-type: none"> Continue to monitor the virus for transmission characteristics and antiviral resistance. Evaluate virus susceptibility to potential late-stage development therapeutic options as a mitigation plan for drug shortages or drug resistance to already-approved therapeutics. Stockpile diagnostic test kits and ancillary reagents; continue to distribute to state public health laboratories as needed. Assess the performance of commercial rapid Influenza diagnostic tests for detecting emerging novel Influenza A. |
| Community mitigation | <ul style="list-style-type: none"> Prepare for implementation of community mitigation measures, in addition to voluntary home isolation of ill persons, respiratory etiquette, hand hygiene, and infection control. These might include voluntary home quarantine of contacts, use of face masks, temporary closure of child care facilities and schools, and social distancing measures. | <ul style="list-style-type: none"> Review all guidance documents and update as needed for the situation (e.g., recommendations on community mitigation measures and other nonpharmaceutical interventions designed to slow the spread of the virus in the community or within certain populations and settings at high risk for infection). Provide updated guidance for border health and travelers' health activities, including travel health notices, as appropriate for the situation. Evaluate and implement required border control measures (entry, exit, or both) as appropriate for the situation; continue to conduct travel volume and pattern analysis. |

See table footnotes on page 14.

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TABLE 2. (Continued) Novel Influenza A virus pandemic (recognition interval): recognition of increased potential for ongoing transmission

| Domain | State/Local | Federal |
|----------------------------------|---|--|
| Medical care and countermeasures | <ul style="list-style-type: none"> Consider implementation of voluntary contact chemoprophylaxis based on current recommendations. Educate clinicians about recommended treatment, prophylaxis, and infection-control guidelines. Initiate contact with coordinators of the local or regional (or both) Strategic National Stockpile (SNS) regarding the potential receipt and distribution of SNS countermeasures, as appropriate. Assess impact on medical care facilities; identify whether medical resources are sufficient to manage ill persons and conduct case-based control efforts; determine if federal assistance is required. | <ul style="list-style-type: none"> Update and release guidance documents as needed for the situation (e.g., comprehensive medical care, infection-control, and countermeasure guidance for policy makers, clinicians, health-care organizations, employers, and public health officials). Review options for provision of mass health care with scarce resources. Consider development of prioritization procedures for materials that could be in short supply. Continue with regulatory readiness steps (e.g., Emergency Use Authorizations [EUAs] for countermeasures). Evaluate whether transmission and severity assessments merit deployment of SNS countermeasures or other therapeutics under EUA. Evaluate whether SNS inventories require replenishment. |
| Vaccine | <ul style="list-style-type: none"> Prepare for vaccine availability and vaccine campaign; refine vaccine distribution and administration plans if a campaign will be initiated, including mass vaccination initiatives and coordination with pharmacies and other groups, as appropriate. Consider enrolling adult, obstetrical, and pediatric health-care providers, including pharmacies, to promote vaccine access to persons in all indicated age and risk groups and ability to identify and vaccinate critical infrastructure personnel. Ensure that all identified vaccinators are authorized, and review policies and procedures regarding identification, authorization and training of nontraditional vaccinators. Confirm vaccine providers have access to the Immunization Information System (IIS) or alternative systems. Review capacity and capabilities of IIS for use by vaccine providers and in mass vaccination clinics for the required dosing schedule anticipated (1 or 2 doses with or without adjuvant). | <ul style="list-style-type: none"> Establish the decision framework for initiating a national vaccine campaign. Evaluate implementation of vaccine manufacturing for distribution as appropriate. Develop and provide technical support and guidance to state, local, tribal, and territorial and private sector partners in preparation for and during a potential pandemic vaccination response in the United States. Engage the Advisory Committee on Immunization Practices regarding vaccination recommendations. Implement systems to monitor vaccine distribution to end-user providers of CDC's vaccine distribution system. Establish or update systems to monitor and assess pandemic vaccine adverse events, coverage, and effectiveness. Consider which vaccine policies need to be developed or updated to support a vaccination response. |
| Risk communication | <ul style="list-style-type: none"> Develop or update a media relations and outreach plan. Disseminate risk communication messages, including what is known, what is not known, and what is being done by public health officials. Disseminate messages for travelers, as well as community mitigation messages, when to seek care, and how to care for ill persons at home as appropriate. Conduct briefings with local, regional, and state response partners, businesses, tribes, and health-care facilities on the potential for escalation, response actions underway, and preparedness steps that partners should consider. Work with CDC, the U.S. Department of Agriculture, and the Food and Drug Administration to disseminate messages to address food safety concerns as appropriate. | <ul style="list-style-type: none"> Develop or update a media relations and outreach plan; disseminate risk communication messages. Disseminate messages for travelers, as well as community mitigation messages, when to seek care, and how to care for ill at home as appropriate. Collaborate, coordinate, and engage with partners and stakeholders. |
| State/Local coordination | <ul style="list-style-type: none"> Continue to coordinate with all partners. | <ul style="list-style-type: none"> Continue to coordinate U.S. government interactions with state/local public health agencies and other partners. Continue administrative preparedness activities. Identify a source of financial support for states and localities to carry out a response. |

* Source: Reed C, Biggerstaff M, Finelli L, et al. Novel framework for assessing epidemiologic effects of Influenza epidemics and pandemics. *Emerg Infect Dis* 2013;19:85–91.

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Initiation Interval (Table 3)

State/Local indicator: Confirmation of human cases of a pandemic influenza virus in the United States with demonstrated efficient and sustained human-to-human transmission.

Federal indicator: Confirmation of human cases of a pandemic influenza virus anywhere in the world with demonstrated efficient and sustained human-to-human transmission.

State and federal indicators can be asynchronous.

TABLE 3. Novel Influenza A virus pandemic (Initiation Interval): Initiation of pandemic wave

| Domain | State/Local | Federal |
|----------------------------------|---|--|
| Incident management | <ul style="list-style-type: none"> Continue or initiate actions described for the recognition interval. Consider activation of state/local emergency operations center. Consider declaring a public health emergency. | <ul style="list-style-type: none"> Continue or initiate actions described for the recognition interval. Consider declaring a public health emergency. |
| Surveillance and epidemiology | <ul style="list-style-type: none"> If affected, continue enhanced surveillance; conduct case investigation and response. If unaffected, prepare for investigation and response. Consider surveillance for influenza hospitalizations and deaths if not already a component of state-based influenza surveillance. | <ul style="list-style-type: none"> Deploy federal responders to states that were initially affected as appropriate. Conduct analyses and field studies; disseminate data regarding transmission, treatment, and prognosis. |
| Laboratory | <ul style="list-style-type: none"> Continue to confirm all suspected cases at a public health laboratory, resources permitting; prepare a plan for limiting testing using surveillance criteria. | <ul style="list-style-type: none"> Remove select agent status and U.S. Department of Agriculture regulations for the novel influenza virus strain. Continue monitoring virus characteristics to identify changes in virulence, transmission, or antiviral resistance markers. |
| Community mitigation | <ul style="list-style-type: none"> Consider implementing appropriate community mitigation measures* in selected affected locations or institutions as indicated by the results of the Pandemic Severity Assessment Framework. | <ul style="list-style-type: none"> Maintain situation-appropriate border and travelers' health measures. Evaluate recommendations for appropriate community mitigation measures. |
| Medical care and countermeasures | <ul style="list-style-type: none"> Monitor the surge in health-care needs and assess whether assistance is needed to mitigate the surge. Review and prepare to deploy a mortality surge (mass mortality) plan. Consider deployment of state/local caches. Consider implementation of voluntary quarantine of contacts and chemoprophylaxis of exposed persons based on current recommendations. | <ul style="list-style-type: none"> Initiate targeted studies of the clinical course of the illness, treatment responses, and disease transmission. Monitor the health-care surge and stress on the health-care system, including provision of key medical resources and tools, as needed. Consider deployment of Strategic National Stockpile antiviral drugs and other material reserves. |
| Vaccine | <ul style="list-style-type: none"> Implement stockpiled pandemic vaccination campaigns if a stockpiled pandemic vaccine is available, appropriate for the emerging virus, and the U.S. government has made the decision to do so. Update the state distribution plan based on CDC prioritization guidelines, estimated state allocation of vaccine, and epidemiology of pandemic influenza in the state. | <ul style="list-style-type: none"> Provide technical support and guidance to state, local, tribal, and territorial (SLTT) and private sector partners in preparation for and during a potential pandemic vaccination response in the United States. Implement and monitor vaccine distribution as appropriate. Monitor and assess pandemic vaccine adverse events, coverage, and effectiveness. Work with the Advisory Committee on Immunization Practices and others to refine policies for vaccine use and prioritization. |
| Risk communication | <ul style="list-style-type: none"> Disseminate updated risk messages, including providing anticipatory guidance or information on what might be expected. Share information regarding antivirals and the possibility of implementation of community mitigation measures as appropriate. Continue to provide regular updates to key partners, stakeholders, elected officials, and the media. | <ul style="list-style-type: none"> Disseminate updated risk messages, including providing anticipatory guidance or information on what might be expected. Share information regarding antivirals and the possibility of implementation of community mitigation measures as appropriate. Continue to coordinate and provide regular updates to key partners, stakeholders, elected officials, and the media. |
| State/Local coordination | <ul style="list-style-type: none"> Continue to coordinate with all partners. Prepare to receive funds to support response, if available. | <ul style="list-style-type: none"> Continue to coordinate with SLTT public health and other partner organizations. If funds are available to support an SLTT response, initiate action to award funds. |

* Source: CDC. Interim pre-pandemic planning guidance: community strategy for pandemic influenza mitigation in the United States—early, targeted, layered use of nonpharmaceutical interventions. Atlanta, GA: CDC; 2007. Available at http://www.flu.gov/planning-preparedness/community/community_mitigation.pdf.

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Acceleration Interval (Table 4)

State/Local indicator: Consistently increasing rate of pandemic influenza cases identified in the state, indicating established transmission.

Federal indicator: Consistently increasing rate of pandemic influenza cases identified in the United States, indicating established transmission.

State and federal indicators can be asynchronous.

TABLE 4. Novel Influenza A virus pandemic (acceleration interval): acceleration of pandemic wave

| Domain | State/Local | Federal |
|----------------------------------|--|--|
| Incident management | <ul style="list-style-type: none"> • Continue or initiate actions described for the Initiation Interval. • Maintain processes to monitor effectiveness of response. | <ul style="list-style-type: none"> • Continue or initiate actions described for the Initiation Interval. • Maintain processes to monitor effectiveness of response. |
| Surveillance and epidemiology | <ul style="list-style-type: none"> • If affected, transition surveillance from individual case confirmation to severe disease and syndromic surveillance as appropriate. • If unaffected, continue individual case confirmation. • Monitor for changes in epidemiology. | <ul style="list-style-type: none"> • Maintain enhanced surveillance. • When appropriate, transition surveillance to severe disease and syndromic surveillance. |
| Laboratory | <ul style="list-style-type: none"> • Provide laboratory confirmation of only a sample of cases as required for virologic surveillance. • Implement revised specimen submission protocol per CDC guidance as appropriate. | <ul style="list-style-type: none"> • Continue monitoring virus characteristics to identify changes in virulence, transmission, or antiviral resistance markers. • Transition to virologic testing of a sample of viruses submitted from states. • Distribute to state public health laboratories recommendations that outline revised specimen submission protocol as needed. |
| Community mitigation | <ul style="list-style-type: none"> • Consider activating (if not already implemented) or expanding (if already implemented) appropriate community mitigation measures for affected communities (such as temporary closure of child care facilities and schools, school and workplace social distancing measures, and postponement or cancellation of mass gatherings). • Monitor effectiveness of community mitigation measures. • Monitor adverse impact of community mitigation measures on society, and coordinate with local response agencies to address the impact if possible. | <ul style="list-style-type: none"> • Maintain situation-appropriate border and travelers' health measures. • Continue or initiate exit screening if appropriate. • Provide, evaluate, and revise recommendations for use of community mitigation measures. • Deploy federal responders or assist states in other ways to evaluate the effectiveness and potential adverse effects of community mitigation measures. |
| Medical care and countermeasures | <ul style="list-style-type: none"> • Monitor and respond to surge in health-care needs, including setting up alternative care sites. • Educate clinicians and the public about the need for prompt treatment of ill persons. • Review and prepare to deploy mortality surge (or mass mortality) plan. • Monitor antiviral use to identify possible shortages. • Consider deployment of state/local caches. | <ul style="list-style-type: none"> • Monitor antiviral use, effectiveness, and adverse events. • Advise on implementation of mitigation strategies for the surge in health-care needs (e.g., activation of alternative care sites and modalities and implementation of situation-appropriate standards of care). • Monitor the health-care surge and stress on the health-care system, including provision of key medical resources and tools, as needed. • Modify guidance documents based on situation as appropriate. • Consider additional deployments of the Strategic National Stockpile antiviral drug reserve and other material. |
| Vaccine | <ul style="list-style-type: none"> • Implement vaccination campaigns if stockpiled pandemic or newly developed antigen-specific pandemic vaccine is available. • Monitor vaccination coverage levels and adverse events. | <ul style="list-style-type: none"> • Implement vaccination campaigns if stockpiled pandemic or newly developed antigen-specific pandemic vaccine is available. • Monitor vaccination coverage levels, adverse events, and vaccine effectiveness. |
| Risk communication | <ul style="list-style-type: none"> • Disseminate updated risk messages. • Share updated information regarding vaccine. • Continue to provide regular updates to partners, stakeholders, elected officials, and the media. | <ul style="list-style-type: none"> • Disseminate updated risk messages. • Share updated information regarding vaccine. • Continue to provide regular updates to partners, stakeholders, elected officials, and the media. |
| State/Local coordination | <ul style="list-style-type: none"> • Continue to coordinate with all partners. • Support maintenance of critical infrastructure and key resources as appropriate. | <ul style="list-style-type: none"> • Continue to coordinate with state, local, tribal, and territorial public health and other partner organizations. • Provide guidance on maintaining critical infrastructure and key resources. |

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Deceleration Interval (Table 5)

State/Local indicator: Consistently decreasing rate of pandemic influenza cases in the state.

Federal indicator: Consistently decreasing rate of pandemic influenza cases in the United States.

State and federal indicators can be asynchronous.

TABLE 5. Novel Influenza A virus pandemic (deceleration interval): deceleration of pandemic wave

| Domain | State/Local | Federal |
|----------------------------------|--|---|
| Incident management | <ul style="list-style-type: none"> Continue actions described for the acceleration interval as appropriate. Review plans, and evaluate whether response activities are proportionate to the situation. | <ul style="list-style-type: none"> Continue actions described for the acceleration interval as appropriate. Review plans, and evaluate whether response activities are proportionate to the situation. |
| Surveillance and epidemiology | <ul style="list-style-type: none"> Continue severe disease and syndromic surveillance. Monitor for changes in epidemiology. | <ul style="list-style-type: none"> Continue severe disease and syndromic surveillance. Continue enhanced surveillance. |
| Laboratory | <ul style="list-style-type: none"> Provide laboratory confirmation of only a sample of cases as required for virologic surveillance. Submit a sample of viruses or specimens to CDC per CDC guidance on revised specimen submission. | <ul style="list-style-type: none"> Continue monitoring virus characteristics to identify changes in virulence, transmission, or antiviral resistance markers. Continue virologic testing of a sample of viruses or specimens submitted from states. |
| Community mitigation | <ul style="list-style-type: none"> Assess, plan for, and implement targeted cessation of community mitigation measures if appropriate. | <ul style="list-style-type: none"> Assist with evaluating the effectiveness and adverse impact of community mitigation measures. Provide planning assistance with cessation of community mitigation and border health measures. |
| Medical care and countermeasures | <ul style="list-style-type: none"> Initiate targeted cessation of surge capacity strategies as appropriate. Maintain aggressive infection-control measures in the community. | <ul style="list-style-type: none"> Provide planning assistance with cessation of surge capacity strategies. |
| Vaccine | <ul style="list-style-type: none"> Continue vaccination response as appropriate. | <ul style="list-style-type: none"> Monitor vaccination coverage levels, adverse events, and vaccine effectiveness. Continue vaccination response as appropriate. Begin vaccine recovery planning if the U.S. government deems such planning necessary. |
| Risk communication | <ul style="list-style-type: none"> Disseminate updated risk messages. Provide information on measures to prepare for and respond to possible additional pandemic waves. | <ul style="list-style-type: none"> Disseminate updated risk messages. Provide information on measures to prepare for and respond to possible additional pandemic waves. |
| State/Local coordination | <ul style="list-style-type: none"> Continue to coordinate with all partners. | <ul style="list-style-type: none"> Continue to coordinate with state, local, tribal, and territorial public health and other partner organizations. |

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Preparation Interval (Table 6)

State/Local indicator: Low pandemic influenza activity with possible continued outbreaks in the state.

Federal indicator: Low pandemic influenza activity with possible continued outbreaks in certain jurisdictions.

TABLE 6. Novel Influenza A virus pandemic (preparation interval): preparation for future pandemic waves

| Domain | State/Local | Federal |
|----------------------------------|--|--|
| Incident management | <ul style="list-style-type: none"> Continue actions described for the deceleration interval as appropriate. Consider deactivation of the state/local emergency operations center. Prepare for subsequent waves. Create an after-action report to document lessons learned. Consider suspending the public health emergency declaration. | <ul style="list-style-type: none"> Continue actions described for the deceleration interval as appropriate. Consider deactivation of the emergency operations center. Prepare for subsequent waves. Create an after-action report to document lessons learned. Consider suspending the public health emergency declaration. |
| Surveillance and epidemiology | <ul style="list-style-type: none"> Continue case confirmation of selected cases to monitor progress of the pandemic and to detect acceleration to the next wave. Begin conducting routine inter-pandemic surveillance. | <ul style="list-style-type: none"> Return to routine inter-pandemic surveillance. Evaluate and update ongoing research protocols as appropriate. |
| Laboratory | <ul style="list-style-type: none"> Return to routine inter-pandemic virologic surveillance. Assess and optimize laboratory capacity. | <ul style="list-style-type: none"> Return to routine inter-pandemic virologic testing. Continue monitoring for viral drift and genetic mutations indicating changes in severity, transmission, or antiviral resistance. |
| Community mitigation | <ul style="list-style-type: none"> Modify community mitigation measures as necessary. Continue to promote community mitigation preparedness activities on standby for a subsequent wave. | <ul style="list-style-type: none"> Provide assistance with cessation or modification of community mitigation measures. |
| Medical care and countermeasures | <ul style="list-style-type: none"> Monitor medical surge trends. Replenish stockpiles or caches as able. Monitor antiviral dispensing and usage trends. | <ul style="list-style-type: none"> Provide assistance with cessation of surge capacity strategies. Replenish stockpiles as able. Assist states/localities with replenishing stockpiles or caches of personal protective equipment, antivirals, and other materials. |
| Vaccine | <ul style="list-style-type: none"> Participate in vaccine recovery as appropriate. Continue to vaccinate, with a focus on hard-to-reach populations, in anticipation of a subsequent wave. | <ul style="list-style-type: none"> Begin vaccine recovery as appropriate. |
| Risk communication | <ul style="list-style-type: none"> Disseminate updated risk messages, including information on measures to prepare for and respond to possible additional pandemic waves. | <ul style="list-style-type: none"> Disseminate updated risk messages, including information on measures to prepare for and respond to possible additional pandemic waves. |
| State/Local coordination | <ul style="list-style-type: none"> Continue to coordinate with all partners. | <ul style="list-style-type: none"> Continue to coordinate with state, local, tribal, and territorial public health and other partner organizations. |

Supplement B: Enhanced Surveillance

Enhanced surveillance can include activities such as modifying reporting practices, reviewing data more frequently or collecting additional data, increasing surveillance in specific areas, and setting up new surveillance systems. The following describes existing surveillance systems routinely in use.

National Influenza Surveillance

- Information on outpatient visits to health care providers for influenza-like illness is collected through the **U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)**. ILINet consists of more than 3,500 enrolled outpatient healthcare providers in all 50 states, Puerto Rico, the District of Columbia and the U.S. Virgin Islands reporting more than 47 million patient visits each year. Each week, approximately 2,200 outpatient healthcare providers around the country report data to CDC on the total number of patients seen for any reason and the number of those patients with influenza-like illness (ILI) by age group. For this system, ILI is defined as fever and a cough and/or a sore throat without a known cause other than influenza.
- **Influenza Hospitalization Surveillance Network (FluSurv-NET)** conducts population-based surveillance for laboratory-confirmed influenza-related hospitalizations in children younger than 18 years of age (since the 2003-04 influenza season) and adults (since the 2005-06 influenza season). The network includes more than 70 counties in the 10 Emerging Infections Program states (not Alaska) and additional Influenza Hospitalization Surveillance Project states.
- **National Center for Health Statistics mortality surveillance data:** The National Center for Health Statistics (NCHS) collects death certificate data from state vital statistics offices for all deaths occurring in the United States. Pneumonia and influenza (P&I) deaths are identified based on ICD-10 multiple cause of death codes. NCHS surveillance data are aggregated by the week of death occurrence. To allow for collection of enough data to produce a stable P&I percentage, NCHS surveillance data are released one week after the week of death. The NCHS surveillance data based on P&I percentage for earlier weeks are continually revised and may increase or decrease as new and updated death certificate data are received from the states by NCHS.
- **Influenza-Associated Pediatric Mortality Surveillance System:** Influenza-associated deaths in children was added as a nationally notifiable condition in 2004. An influenza-associated pediatric death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory diagnostic test., with no period of complete recovery between the illness and death. Demographic and clinical information are collected on each case and are transmitted to CDC.
- **State-level assessments:** These are weekly reports from state, territorial, and large city health departments on the overall level of influenza activity within their jurisdictions.
- **Virologic Surveillance (see below).**

Alaska Influenza Surveillance

- **Influenza Virus Surveillance Sentinel Program with CDC:** The ASVL participates in the U.S. WHO collaborating laboratories influenza virus surveillance program. The ASVL identifies and subtypes influenza viruses year-round and reports these data electronically to CDC on a daily basis. There are at least 40 health care providers throughout Alaska that function as sentinel providers for influenza surveillance in Alaska. Sentinel providers are mailed influenza testing kits and instructions in September. These kits are also provided throughout the year, including the summer months, for surveillance. Guidance to all providers is given via the ASVL Test Directory, phone calls, weekly reports, and Epidemiology *Bulletins*. The ASVL accepts viral samples for flu testing from any health care provider free of charge in Alaska.
- **Influenza-like Illness Surveillance:** Outpatient providers in Alaska can elect to report the total number of patient visits each week and the number of patient visits for ILI by age group (0-4 years, 5-24 years, 25-64 years, ≥ 65 years). These data are transmitted once per week to a central data repository at CDC via the Internet.
- **Syndromic Surveillance:** Syndromic surveillance data are monitored throughout Influenza season for ILI activity. ILI data from syndromic surveillance are aggregated with ILI surveillance from outpatient providers, and submitted to the CDC.
- **Lab reporting:** Influenza is a condition reportable by laboratories (7 AAC 27.007) in Alaska. Positive lab tests, including rapid tests, for influenza are reportable to the SOE. Lab-confirmed influenza is monitored on a weekly basis by the SOE Influenza Coordinator.
- **Influenza Activity as Assessed by State and Territorial Epidemiologists:** Each week during the traditional influenza season (October–May), all states review their weekly morbidity data of influenza reports to determine if there is any influenza activity and how many regions of the state are affected. This is then reported electronically to CDC as: no, sporadic, local, regional, or widespread activity.
- **Influenza-Associated Death Reporting:** An Epidemiology *Bulletin* was released in November 2004 requesting Alaska providers to report any pediatric death associated with influenza. All pediatric deaths with respiratory illness are to have specimens obtained for influenza testing and the ASVL will notify the SOE Influenza Coordinator of the results. In December 2013, the State of Alaska added adult influenza-associated deaths as reportable.
- **Reporting out:** On a weekly basis during flu season, the SOE Influenza Coordinator communicates the results of surveillance to the public via the Flu Snapshot. The Flu Snapshot contains lab-confirmed influenza case counts by type and region, a comparison of current case counts to past seasons, and outpatient ILI data from outpatient ILINet reporters and syndromic surveillance. ASVL also publishes a weekly report that describes routine testing outcomes of specimens received from sentinel providers. The report describes concurrence of results obtained by the CDC influenza real-time PCR assays as compared to sentinel provider rapid test results. The report also summarizes the results of antigenic characterization and antiviral resistance performed by CDC reference centers.

Enhanced Surveillance During an Influenza Pandemic

A successful response to an influenza pandemic requires early detection, when case counts are low and there is not widespread geographic spread of the virus. Sensitive surveillance systems capable of detecting unusual events that are limited in scope are critical. The SOE will consider implementing enhanced influenza surveillance during the following circumstances:

- Suspected or confirmed emergence of a novel strain of influenza in the U.S.
- Declaration by CDC of a novel strain as a “disease of public health significance”
- Declaration by CDC of a pandemic strain circulating in the U.S.
- The U.S. Secretary of Health and Human Services determines, after consultation with such public health officials as may be necessary, that:
 - A disease or disorder presents a public health emergency (PHE); or
 - A PHE, including significant outbreaks of infectious diseases or bioterrorist attacks, otherwise exists (PHS Act § 319)

Enhanced surveillance will continue until SOE and/or the DHSS EOC determines it is no longer necessary.

Please note that much of the following text is taken, verbatim, from the 2017 update of the *WHO guidance for surveillance during an influenza pandemic*.¹⁰ The lists of priority activities provided in this Supplement are not intended to be exhaustive; other activities should be considered as needed.

Three pandemic surveillance components capture the different surveillance objectives that arise before and during a pandemic (Table 1).

Table 1. Summary of the three key pandemic surveillance components.¹⁰

| COMPONENT | | | |
|---|--|---|--|
| | VERIFICATION AND DETECTION | RISK AND SEVERITY ASSESSMENTS | MONITORING THE PANDEMIC |
| Pandemic phase | Alert | Alert, pandemic, transition, interpandemic | Pandemic, transition |
| Objective | In initial country, verify sustained human-to-human transmission. In other countries, detect first cases that may signal imported cases of the influenza virus with pandemic potential. | Characterize the features of the new disease, as appropriate. Collect data and undertake national risk assessment. Understand the transmissibility, seriousness of disease and impact of the influenza virus. | Monitor the disease, including geographical spread, trend, transmissibility, seriousness of disease and impact. |
| Key system features | Outbreak investigations. Active case finding. Use routine and event-based surveillance, including virological surveillance. | Case-based reporting and detailed epidemiological, clinical and virological data collection from early cases. | Pandemic surveillance of ILI and SARI cases, systematic laboratory testing of a sample of cases, clinical data and qualitative indicators. |
| Action at the national level | Investigation of first cases of human-to-human transmission and clusters. Analyse and interpret early data. Notification and reporting to WHO. | Rapid risk and severity assessment of early cases. Modify responses according to national risk assessments. Implement and monitor impact of early intervention strategies. Report results of national risk and severity assessments to WHO. | Monitor the situation. Assess effectiveness of public health interventions. Continue to modify responses in accordance with risk and severity assessments. Report to WHO. |
| Action at the global level | Initiate joint risk assessment. Determine risk of global spread. Alert Member States and encourage strengthening of surveillance systems. | Aggregate epidemiological, clinical and virological data. Provide early assessment of pandemic risk and likely severity. | Monitor the pandemic. Update assessments as required. Modify global recommendations for surveillance, public health interventions, clinical management, etc. in response to data from Member States. |
| ILI, influenza-like illness; SARI, severe acute respiratory infection; WHO, World Health Organization | | | |

As mentioned above, early detection of the start of a pandemic is crucial to rapidly implement measures to control the outbreak at its source, and to mitigate the impacts by slowing the spread of the virus. The activities relevant to the “Verification and Detection” component are listed in Table 2 below.

Table 2. Surveillance activities during the verification and detection surveillance component.¹⁰

PRIORITY SURVEILLANCE ACTIVITIES

- Formulate case definitions, including suspected and confirmed cases, imported and locally transmitted.
- Alert clinicians and hospitals to report additional cases and clusters.
- Initiate active case finding – may include contact tracing and chart reviews (particularly in hospital wards where cases with known symptoms may be admitted).
- Prepare line list of initial cases (see Section 3.4 for further details).
- Investigate outbreaks, particularly clusters.
- Undertake initial analyses including producing epidemic curves, clinical symptoms, cases by age groups and spot maps of confirmed cases.
- Verify that sustained human-to-human transmission is occurring.
- Collect clinical data of confirmed cases including symptoms, comorbidities and outcomes.
- Use a laboratory system to report cases, collect and share specimens through the GISRS network.
- Summarize the outbreak.
- Submit timely data to FluNet and FluID.¹



¹ WHO has developed FluID (http://www.who.int/influenza/surveillance_monitoring/fluid/en/), a surveillance system that can be used by countries to assist in reporting epidemiological data. The relevant WHO regional office should be consulted for further guidance about online access to FluID. FluNet (<http://www.who.int/flunet>) is used for the reporting of virological data from laboratories. Contact WHO headquarters (GISN@who.int) for questions concerning FluNet.

Once sustained human-to-human transmission has been verified, detailed risk and severity assessments of the earliest cases of pandemic influenza will be needed. The primary objective of the risk and severity assessment surveillance component (together with information from special studies) is to characterize the new pandemic at an early stage to facilitate more effective responses. Information from risk and severity assessments will be critical to policy-makers in the affected country for making informed decisions about pandemic mitigation strategies, to healthcare providers for treating ill persons, and to the general public for reducing their risk of infection and minimizing damaging rumors. Understanding the transmissibility, seriousness of disease, and impact of the influenza virus will help in ascertaining the likelihood of a severe pandemic. The SOE would attempt to collect information that would allow for the estimation of transmissibility and severity as described in Tables 3 and 4 below.

Supplement B

Table 3. Scaled measures of transmission and clinical severity for the initial assessment of pandemic influenza effects.¹¹

| Parameter no. and description | Scale | |
|--|--|--|
| | Low-moderate | Moderate-high |
| Transmissibility | | |
| 1. Secondary attack rate, household, % | ≤20 | >20 |
| 2. Attack rate, school or university, % | ≤30 | >30 |
| 3. Attack rate, workplace or community, % | ≤20 | >20 |
| 4. R ₀ : basic reproductive no. | 1.0–1.7 | ≥1.8 |
| 5. Underlying population immunity | Some underlying population immunity present <10 | No underlying population immunity present ≥10 |
| 6. Emergency department or other outpatient visits for influenza-like illness, % | | |
| 7. Virologic characterization | Genetic markers for transmissibility absent | Genetic markers for transmissibility present |
| 8. Animal models—transmission studies | Less efficient or similar to seasonal influenza | More efficient than seasonal influenza |
| Clinical severity | | |
| 1. Upper boundary of case-fatality ratio, % | <1 | ≥1 |
| 2. Upper boundary of case-hospitalization ratio, % | <10 | ≥10 |
| 3. Ratio, deaths: hospitalizations, % | <10 | ≥10 |
| 4. Virologic characterization | Genetic markers for virulence absent | Genetic markers for virulence present |
| 5. Animal models | Less virulent or similar to seasonal influenza | More virulent than seasonal influenza |

Table 4. Scaled measures of transmission and clinical severity for the refined assessment of pandemic influenza effects.¹¹

| Parameter no. and description | Scale | | | | | | |
|--|-------|-----------|----------|----------|----------|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Transmissibility | | | | | | | |
| 1. Symptomatic attack rate, community, % | ≤10 | 11–15 | 16–20 | 21–24 | ≥25 | | |
| 2. Symptomatic attack rate, school, % | ≤20 | 21–25 | 26–30 | 31–35 | ≥36 | | |
| 3. Symptomatic attack rate, workplace, % | ≤10 | 11–15 | 16–20 | 21–24 | ≥25 | | |
| 4. Household secondary attack rate, symptomatic, % | ≤5 | 6–10 | 11–15 | 16–20 | ≥21 | | |
| 5. R ₀ : basic reproductive no. | ≤1.1 | 1.2–1.3 | 1.4–1.5 | 1.6–1.7 | ≥1.8 | | |
| 6. Peak % outpatient visits for influenza-like illness | 1–3 | 4–6 | 7–9 | 10–12 | ≥13 | | |
| Clinical severity | | | | | | | |
| 1. Case-fatality ratio, % | <0.02 | 0.02–0.05 | 0.05–0.1 | 0.1–0.25 | 0.25–0.5 | 0.5–1 | >1 |
| 2. Case-hospitalization ratio, % | <0.5 | 0.5–0.8 | 0.8–1.5 | 1.5–3 | 3–5 | 5–7 | >7 |
| 3. Ratio, deaths: hospitalization, % | ≤3 | 4–6 | 7–9 | 10–12 | 13–15 | 16–18 | >18 |

Priority activities relevant to the “Risk and Severity” component are listed in Table 5 on the following page.

The primary objective of surveillance monitoring during the pandemic is to track the course of the pandemic. Case-based reporting (the counting of individual cases) should cease once there is broad community transmission in a country – at this point, syndromic data from sentinel sites, hospital-based data, and systematic laboratory testing should be used instead. Priority activities relevant to the “Monitoring the Pandemic” component are listed in Table 6.

Table 5. Surveillance activities during the risk and severity surveillance component.¹⁰

PRIORITY SURVEILLANCE ACTIVITIES

- Refine the case definition.
- Continue active case finding.
- Prepare line list of initial cases (see Section 3.4 for further details).
- Collect respiratory and blood samples from early cases.
- Ensure laboratory systems are in place to confirm samples.¹
- Manage the collection of data, including database management and data cleaning.
- Collect clinical data including symptoms, comorbidities and outcomes.
- Identify at-risk groups, and distribution of cases by age group.
- Follow the steps for pandemic influenza risk management (see Section 4.4 for further details).
- Undertake a situational analysis² and assess the risk of further spread and severity.
- Encourage clinicians and hospitals to look for and report additional cases and clusters.
- Submit virus isolates or clinical specimens (or both) for further evaluation and confirmatory testing to the GISRS network.
- Submit timely data to FluNet and FluID.
- Implement and monitor the impact of early public health intervention strategies.
- Mobilize additional epidemiological and laboratory resources.
- Summarize the outbreak data analysis in regular situation reports.

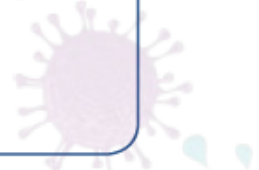


Table 6. Surveillance activities during the monitoring the pandemic surveillance component.¹⁰

| PRIORITY SURVEILLANCE ACTIVITIES | |
|---|---|
| ■ | Cease case-based data collection and reporting. |
| ■ | Modify national case definitions and update clinical and laboratory algorithms for diagnosis, as necessary. |
| ■ | Document the evolving national epidemic including population susceptibility, changes in epidemiological and clinical features, geographical spread, trends and impact. |
| ■ | Collect more detailed epidemiological and clinical data as time and resources permit. |
| ■ | Maintain adequate virological surveillance to detect antigenic and genetic changes, and changes in antiviral susceptibility and pathogenicity. |
| ■ | Summarize the outbreak in regular situational reports that inform decision-makers and the public about new information or other changes that affect disease status, signs and symptoms, case definitions, protocols and algorithms. |



Based on activities described in the HHS Pandemic Influenza Plan: 2017 Update, the SOE will also consider:

- Using “Big Data” to improve its ability to monitor and describe influenza disease. Supplemental data sources (e.g., electronic health records, or social media) will be considered as sources of data to better monitor and characterize pandemic influenza activity in as close to real time as possible.
- Monitoring at-home diagnosis and treatment, to prevent and control further spread of disease during a pandemic (e.g., work with Flu On Call).
- Working with the Department of Environmental Conservation to enhance surveillance of influenza viruses in birds, swine, and other animals, and to improve tools and for monitoring workers engaged in responding to influenza outbreaks in animals.

Appendix A: Example of a Novel Influenza A Case Screening Form

May be used by for persons under investigation (PUI) for possible human infection with novel influenza A viruses (e.g., variant H3N2v, avian H7N9).

| | | | | | |
|---|--|---|---|--------------|--|
| Reporting jurisdiction: | | Case residence city/village: | | Case phone: | |
| Interviewer name: | | Phone: | | Email: | |
| Case name: | | Parent/guardian name (for minors): | | | |
| Date of report: (mm/dd/yyyy): ____/____/____ | | <input type="checkbox"/> New report <input type="checkbox"/> Update to previous report | | | |
| Unique ID: | | | | Specimen ID: | |
| Indicate how case was identified <input type="checkbox"/> Clinician notified health department <input type="checkbox"/> Unusual lab result <input type="checkbox"/> Ill traveler identified returning to US <input type="checkbox"/> Other: _____ | | | | | |
| Age: ____ <input type="checkbox"/> Years <input type="checkbox"/> Months If Age Unknown: <input type="checkbox"/> Child <input type="checkbox"/> Adult Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown | | | | | |
| Date of illness onset (mm/dd/yyyy): ____/____/____ | | Symptoms: <input type="checkbox"/> Fever ($\geq 100^{\circ}\text{F}$) <input type="checkbox"/> Cough <input type="checkbox"/> Sore Throat <input type="checkbox"/> Fatigue <input type="checkbox"/> Vomiting <input type="checkbox"/> Headache <input type="checkbox"/> Muscle aches <input type="checkbox"/> Red/drainage eyes <input type="checkbox"/> Other: _____ | | | |
| Was person hospitalized for this illness? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, date of admission: (mm/dd/yyyy): ____/____/____ | | | Did person die as a result of this illness? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, date of death: (mm/dd/yyyy): ____/____/____ | | |
| Did person have contact with <u>swine</u> in the 10 days prior to illness onset? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <i>Contact may be directly touching swine or walking through an area where swine are present. (If Yes, describe):</i> | | | Did person have contact with <u>poultry/birds</u> in the 10 days prior to illness onset? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <i>Contact may be directly touching poultry/birds or walking through an area where poultry/birds are present. (If Yes, describe):</i> | | |
| Did person travel ≤ 10 days prior to illness to an area where confirmed cases of novel influenza A were reported? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, list destination and dates of travel (including date of return to US): | | | | | |

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| |
|---|
| Did person attend an agricultural event (such as a fair or live animal market) ≤ 10 days prior to illness? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, list events and dates of attendance: |
| Did person have contact ≤ 10 days prior to illness with someone who had fever or respiratory illness? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, describe relationship and dates of contact: |
| Was this person tested for influenza? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Test type: <input type="checkbox"/> Rapid antigen <input type="checkbox"/> RT-PCR <input type="checkbox"/> Other Test result: <input type="checkbox"/> Influenza A <input type="checkbox"/> Influenza B <input type="checkbox"/> Influenza A/B (type not distinguished) <input type="checkbox"/> Negative <input type="checkbox"/> Other: _____ |
| Specimen collection date (mm/dd/yyyy): ____/____/____ Has a specimen been sent to CDC? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| What PPE did healthcare personnel use when caring for patient or obtaining specimens? <input type="checkbox"/> N95 mask <input type="checkbox"/> Surgical mask <input type="checkbox"/> Eye protection <input type="checkbox"/> Gloves <input type="checkbox"/> Gown <input type="checkbox"/> None <input type="checkbox"/> Unknown |
| Is this person a contact of another PUI, or probable or confirmed case? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, Unique ID of the other case and nature of the relationship (<i>e.g., Case is the sister of NBS XYZ</i>): |

- As necessary, arrange specimen collection for all PUIs (at a minimum, nasopharyngeal (NP) swab collection for RT-PCR testing at the state public health laboratory)
- Advise patients with influenza-like illness to consult with a healthcare provider.
- Consult with healthcare facilities regarding appropriate isolation precautions for PUIs. Non-hospitalized cases under investigation should be advised to stay home from school, work, and social gatherings until fever is gone for at least 24 hours without the use of fever-reducing medications.

Supplement C: Specimen Collection and Laboratory Testing

Assumptions

During an influenza pandemic:

- Specimen triage may become necessary at the ASVL if the volume of submissions overwhelms laboratory capacity. Surge capacity testing may be initiated at the Alaska State Public Health Laboratory in Anchorage (ASPHL).
- Rapid influenza test methods may not be dependable for detecting a novel influenza virus at clinical laboratories.
- Public Health Centers (PHCs), clinics and laboratories expecting to test for influenza viruses will have influenza specimen collection supplies, packaging and shipping materials available.
- Most cases of pandemic influenza will be diagnosed based on clinical findings without laboratory confirmation.
- Specimen collection, testing and triage recommendations will change during the course of a pandemic.

Implementation

Prepandemic Intervals

Routine Seasonal Influenza Surveillance

Routine Seasonal Influenza Surveillance is performed year round at the ASVL in Fairbanks:

- Influenza PCR will be performed on all specimens submitted from:
 - Sentinel surveillance sites
 - Sentinel sites are prearranged and receive all necessary materials and instructions for collection and shipping in advance of their season
 - Sentinel sites are selected on the basis of geographic location, historic sample submission statistics, and willingness to participate
 - Non-sentinel providers statewide that would like particular clinical ILI specimens tested by ASVL
 - Influenza outbreak investigations
- Sample submission:
 - Specimens should be shipped chilled on ice packs using Biological Substance Category B packaging unless otherwise instructed

Supplement C

- The specimens must be labeled with 2 patient identifiers (ex. full name and date of birth), with an accompanying request form that clearly indicates the specimen is to be tested for influenza. The information on the tube must match the paperwork exactly.
- All respiratory specimens received by ASVL will undergo influenza and RSV real-time PCR testing using assays designed by CDC. ASVL also has available a respiratory pathogen panel for detection of 16 viral and 2 bacterial targets in a single, multiplexed assay (see below).
 - Influenza A and B (including currently circulating subtypes)
 - Respiratory syncytial virus (RSV) A & B
 - Adenovirus
 - Rhinovirus/Enterovirus (indistinguishable)
 - Parainfluenza virus (PIV) 1, 2, 3, and 4
 - Human metapneumovirus
 - Bocavirus
 - Low-pathogenic coronavirus (OC43, NL63, 229E, and HKU1)
 - *Mycoplasma pneumoniae*
 - *Chlamydia pneumoniae*
- The testing above is routinely completed within 72 hours of receipt at ASVL; however, under exigent circumstances, testing can be completed within 24 hours of receipt.
- ASVL will follow the CDC Influenza Branch recommendations regarding confirmation and additional typing by sending selected influenza samples to the appropriate CDC contract lab or to the CDC/WHO Influenza Laboratory in Atlanta.

Influenza Data Dispersal

ASVL gathers data on the rapid influenza testing results provided by clinical laboratories when they submit their samples for testing at ASVL. This information is shared with other clinical labs in Alaska via a weekly newsletter so they can consider the sensitivity and specificity of the rapid testing kits currently in use.

All data generated at ASVL are available to the Section of Epidemiology for analysis. The data can be used to locate, track, and characterize the distribution of seasonal influenza within the state

Data from influenza PCR are directly reported to the WHO and CDC nightly using the public health laboratory interoperability project (PHLIP) data exchange protocol.

Pandemic Intervals

Routine laboratory surveillance for seasonal influenza activity will continue, as above.

Supplement C

Novel pandemic virus laboratory surveillance - role of the Alaska State Viral Laboratory:

- The ASVL will perform polymerase chain reaction (PCR) testing following the guidelines and protocols set forth by the Centers for Disease Control:
 - The ASVL will follow CDC's recommendations regarding acceptable specimen sample types. The preferred specimen for influenza testing is generally a nasopharyngeal swab. Other sample types which may be approved include: sputum, throat swabs, NP washes/aspirates, bronchial lavage, and lung tissue. Swab material must be polyester (Dacron). All specimens (swabs, washes, aspirates, or tissue) must be stabilized in non-expired universal transport media (UTM) for transport.

The ASVL will provide updates to submitting laboratories and the Section of Epidemiology regarding optimal specimen collection recommendations for novel pandemic influenza virus detection as needed.
- Specimens should be shipped using Biological Substance Category B packaging unless otherwise instructed. Every specimen must be labeled and have a matching test request form that clearly indicate the specimen is to be tested for influenza.
- Respiratory specimens from individuals who meet the CDC case definition for possible pandemic influenza, will be tested using CDC's PCR assays for influenza A (hemagglutinin types H1, H3, H5 or H7) and for influenza B.
 - Results will be available within 24–48 hours after receipt at the ASVL.
 - Any positive novel influenza A samples will be considered presumptive positive and forwarded to CDC for confirmation and further characterization.
- Specimens will be tested at ASVL in Fairbanks to the extent possible. In the event ASVL requires surge capacity intervention, the ASVL Lab Manager will collaborate with the ASPHL Lab Director in Anchorage and notify the SOE if samples need to be routed the ASPHL in Anchorage.
 - Clinical specimens will be processed at ASPHL based upon:
 - The ASPHL capacity
 - Whether or not it is necessary to document the presence of the pandemic strain in:
 - A given geographic area
 - Institution (e.g., nursing home, dormitory, hospital, prison)
 - Other defined population group
 - Specimens submitted directly to the ASPHL without prior approval by the SOE will be run on a case-by-case basis according to:
 - ASPHL capacity

Supplement C

- The need for additional surveillance data for the geographic region or population group represented by that specimen(s)

Novel pandemic virus laboratory surveillance—role of the Section of Epidemiology:

- Outbreak investigation(s) team from SOE will investigate initial cases/clusters¹ in order to implement containment measures, limit social disruption, and manage public health information. Appropriately trained staff from other Sections of the Division of Public Health or from other agencies may supplement outbreak investigation teams.
- All clinical specimens taken from patients must be approved for processing by the SOE.
- Increased specimen collection for laboratory testing at sentinel surveillance sites and participation of influenza-like-illness reporting may be requested to detect entry and spread of a pandemic influenza strain into the State.
- The Section of Epidemiology will notify ASVL of all specimens approved for processing, either by phone, facsimile, or a secure Internet-based system (e.g., DSM).
- The Section of Epidemiology will notify and update health care providers through the Alaska Public Health Alert Network (AK-PHAN), Epidemiology Bulletins, and faxes regarding:
 - The case definition for pandemic influenza disease
 - How, what type, and amount of specimens to collect (based on ASVL recommendations)
 - Optimal timing to collect specimen (ideally, as soon as possible after onset of illness)

Fairbanks Lab Request Form includes a space under Influenza and RSV Surveillance Information to Describe Relevant Travel History or Describe Contact with swine or fowl. These areas may be used by the Section of Epidemiology to document the situation for ASVL and to confirm that they are approved for processing.

During pandemic transmission of a novel influenza virus, other response activities (e.g., those intended to limit the spread of the virus) will take precedence over specimen collection surveillance activities; however, some specimen collection will continue, to detect the initial cases in a new geographic area and to monitor antigenic and genetic changes and antiviral resistance patterns, in collaboration with the CDC and the WHO.

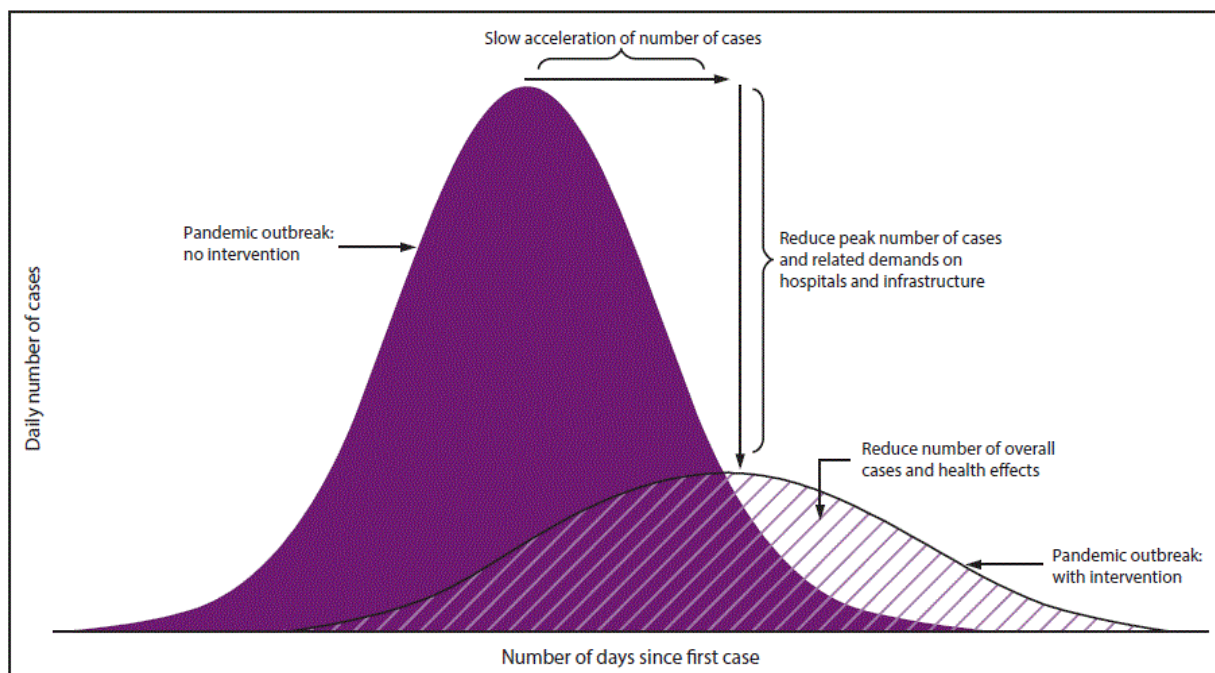
¹ In general, a cluster is 3 or more people with illness meeting the case definition for pandemic influenza and with onsets of illness within 7 to 10 days of each other within a defined geographical area. However, any cluster of deaths from respiratory disease of unexplained cause should result in immediate reporting, regardless of contact history and may require further investigation.

Supplement D: Nonpharmaceutical Interventions

Background

Nonpharmaceutical interventions aim to delay the spread of a pandemic, reduce demand for health care resources, and decrease the overall number of people who become ill (Figure 1). These interventions include personal, community, and environmental actions that can be particularly critical before vaccine is available. Decisions regarding the use of NPIs may be done at the state or local level and should be based on surveillance indicators, the severity (both transmissibility and clinical severity) of the virus, and the current pandemic interval.⁸ As feasible, implementation of NPIs will be directed by communities and local jurisdictions, with guidance provided by the state if requested. A “layered” approach to implementation is recommended, i.e., NPIs should be phased in. This supplement addresses the implementation of NPI and is largely based on CDC guidance.⁸

Figure 1. Goals of community mitigation for pandemic influenza.⁸



Alaskans must recognize the degree to which their personal actions will govern the course of pandemic influenza in the state. Success or failure of NPIs is largely dependent on individual actions. Community engagement will be critical to the effectiveness of NPIs; **communication surrounding any interventions put forth must be a priority.** The CDC has developed NPI pandemic planning guidelines and checklists to aid individuals, schools, businesses, and others in successfully planning for and implementing NPIs. These are available at: <https://www.cdc.gov/nonpharmaceutical-interventions/tools-resources/planning-guidance-checklists.html>

Specific Interventions

Personal

Specific interventions incorporate actions that individuals can take to protect themselves, their families, and their communities. Some are good practices all of the time, others would only be used in the event of a severe pandemic. Good practices that are always advisable should be emphasized early in the pandemic and include:

- Voluntary isolation at home when ill
- Respiratory hygiene (for example, covering your cough and discarding used tissues)
- Hand hygiene (for example, using soap and warm water or alcohol-based hand sanitizer regularly)

Additional activities that may be encouraged during a pandemic include:

- Voluntary home quarantine of non-ill household contacts of an ill person (see additional information below)
- Use of face masks by ill persons (or less likely, by well persons in community settings)

Voluntary Quarantine

Voluntary home quarantine refers to household contacts of ill persons, who may be at increased risk of contracting pandemic disease, staying home for 3 days following their initial exposure to an ill person. The rationale is that household members may have asymptomatic illness and may be able to shed influenza virus, facilitating transmission in the community.

Community

Community-level interventions may be implemented at a political jurisdiction or a geographically defined area such as a village, a region, or the entire state. The potential disadvantages of community-level interventions, such as societal disruptions and economic cost, must be factored into the decision to implement them. The severity of the pandemic can help inform decision making surrounding the implementation of community-level NPIs.

Social distancing strategies are intended to reduce the spread of disease from person-to-person by discouraging or preventing people from coming in close contact with each other. Social distancing measures include:

- Closing public places and/or canceling public gatherings (e.g., concerts, plays, sporting events)

Supplement D

- Modifying workplace practices by implementing emergency staffing plans, including increasing telecommuting, flex scheduling and other options. In the workplace, develop an organization-specific pandemic influenza plan that addresses:
 - The use of teleconferences, and other alternatives to face-to-face meetings
 - Modified work schedules and practices (e.g., telework, staggered shifts)
 - Engineering controls (e.g., sneeze guards, no touch trash cans, drive through windows for clients/customers)
 - Onsite illness screening for employees at the beginning of work shifts
 - For more information on workplace responses to pandemic influenza, see http://www.osha.gov/Publications/influenza_pandemic.html
 - In the event of workplace closures, there are services and personnel in the non-health sector that are critical for community functioning. State and local officials will need to carefully consider which services (and key personnel within relevant firms or organizations) are "essential" and ensure that these services are provided as needed
- Increasing the distance between people on public transit vehicles (e.g., increasing the frequency of high-utilization routes, restricting the number of passengers)
- Increase the space between people at school to at least 3 feet or limit face-to-face contact between people at school (e.g., moving desks farther apart, leaving empty seats between students, dividing classes into smaller groups, holding outdoor classes, and canceling school-related group meetings and activities)

School closures are another community-level NPI and are recommended for consideration early in a severe pandemic. Activities associated with school closures include the following:

- In collaboration with the school district, develop a community communication plan for notification of school closure and ongoing situation updates
- Plan for consistent implementation among all schools and childcare facilities (private and public) in the community or region
- Consider methods of continuity of instruction including offering web-based distance instruction, mailed lessons and assignments, or offering instruction via local radio or television stations
- Work with boarding schools, colleges, and universities to develop a plan to manage or assist large numbers of students to return to their home within a short time period; the plan should also consider those students who are unable to travel home during a pandemic

Additional community measures including travel restrictions should be done in consultation with the CDC.

Environmental

Using appropriate cleaning solution to disinfect environmental surfaces, especially “high touch” areas like door knobs, is always a good practice for staying healthy. Thorough cleaning should be encouraged from the start of the pandemic, and be done in households, workplaces, public locations, and other locations as appropriate.

Prepandemic Intervals (Investigation, Recognition)

- Review guidance on implementation of NPIs
- Collaborate with local jurisdictions to develop options to institute these strategies
- Review communication processes and lists of critical contacts to help ensure efficient communication
- Participate in the school district planning for school closures and communication during dismissal and re-opening

Pandemic Intervals (Initiation, Acceleration, Deceleration, and Preparation)

- Determine when specific NPIs should be started and discontinued
- Provide regular communication to the community
- Implement NPIs at the direction of the DPH
- Monitor the effectiveness of NPIs
- Discontinue NPIs as appropriate

Guidelines for Initiating Isolation and Quarantine

Definitions

Isolation means the separation of infected persons from other persons to prevent transmission to others during the period of communicability.

Quarantine means the separation or limitation of movement of well persons who are suspected to have been exposed to an infectious agent; quarantine duration is based upon the incubation period of the infectious agent. In both isolation and quarantine scenarios, persons caring for infectious or potentially infectious individuals must take precautions to minimize their risk of infection.

Overview

DHSS may isolate or quarantine an individual or group of individuals if isolation or quarantine is the least restrictive alternative necessary to prevent the spread of a contagious or possibly contagious disease to others. The Guidelines for Isolation and Quarantine provide guidance and structure for the Alaska DHSS regarding isolation and quarantine. These activities, which are intended to contain or control disease, include the initiation, continuance, and release of persons from isolation or quarantine. During an influenza pandemic, it is most likely that only voluntary isolation and quarantine would be considered. In the event isolation or quarantine requires a court order, specific legal requirements and processes must be followed.

Alaska Statute AS 18.15.385 defines the parameters and authority by which isolation and quarantine control measures may be implemented. This process is as follows:

1. Determine if the individual presents a high risk to the public's health.
2. Confer with the Human Services Section, Alaska Attorney General's Office.
3. Complete isolation/quarantine order template (P:\Infectious\Isolation & Quarantine)
4. Coordinate with local Public Health Nursing and health care provider:
 - a. Determine level of care required during isolation/quarantine.
 - b. Designate place of isolation/quarantine (i.e., home, hospital) and duration.
5. Obtain address and contact information for patient.
6. Notify process server or State Troopers of impending orders to serve.
7. Complete the following documents:
 - a. Isolation\Quarantine Order
 - b. Notice of Rights
8. Send completed and signed order and forms (by fax or DSM) to AGO for review.
9. Once approved, place embossed State Seal on the Order (*available in DPH Director's office*).
10. Place Isolation/Quarantine Order and Notice of Rights in a plain envelope. Write the patient's name on the outside. Seal the envelope.
11. Complete the Direction for Service form. Specify a deadline for serving the order.
12. Complete the Certificate of Service.
13. Give the sealed envelope (Isolation/Quarantine Order and Notice of Rights), the Certificate of Service, and the Direction for Service to whoever will serve the papers to the patient.

Supplement D

- a. If a professional process server is available in the community where the patient lives, this may be the most efficient route to have the order served. There will be a cost associated with this.
- b. If no professional process server is available, request assistance from the State Troopers to serve the papers.

Contact a Criminal Justice Technician (CJT) at: [REDACTED]

Send the sealed envelope, the Certificate of Service, and the Direction for Service as directed and the CJT will then send it out to the appropriate State Trooper office to be served.

14. Follow-up as needed. Be sure to obtain the completed Certificate of Service.

Initiation

Isolation and quarantine may include confinement to private homes or other private and public premises; absent exceptional circumstances that would jeopardize public health, a person shall be allowed to choose confinement in the person's home. Before quarantining or isolating an individual, the department shall obtain a written order from the superior court authorizing the isolation or quarantine unless the individual consents to the quarantine or isolation. Orders are enforceable by a peace officer of the state.

Continuance

Voluntary isolation or quarantine may continue as long as DHSS deems necessary and the isolated/quarantined individuals provide consent. Before the expiration of a court ordered isolation or quarantine, the court may continue isolation or quarantine for additional periods not to exceed 30 days upon a showing, by the Department, of clear and convincing evidence that the action is necessary to prevent or limit person-to-person transmission of a disease that poses a significant risk to the public's health.

Release

DHSS shall immediately terminate an isolation and quarantine order when an individual or group poses no substantial risk of transmitting the disease in question to others. DHSS shall provide the isolated or quarantined individuals written documentation of termination of isolation or quarantine. Refer to the Appendix D Termination of Isolation or Quarantine Letter.

Relevant Links and Resources

State of Alaska:

http://www.epi.alaska.gov/bulletins/docs/b2012_19.pdf

CDC:

<http://www.cdc.gov/quarantine/>

<http://www.cdc.gov/quarantine/QuarantineStationQuickReference.html>

Appendix of Guiding Documents

- A. Requests for Voluntary Isolation/Quarantine
 - A1. Request for Voluntary Isolation
 - A2. Request for Voluntary Quarantine
- B. Home I&Q Checklist
- C. Termination of Isolation or Quarantine Letter

Supplement D



THE STATE
of ALASKA
GOVERNOR MICHAEL J. DUNLEAVY

Department of Health and Social Services

DIVISION OF PUBLIC HEALTH
Section of Epidemiology

3601 C Street, Suite 540
Anchorage, Alaska 99503
Main: 907.269.8000
Fax: 907.562.7802

Appendix A1: Request for Voluntary Isolation

Date: _____

Dear: _____,

I request that you voluntarily isolate yourself because you are ill with confirmed or suspected _____ . I believe this is necessary because: _____ .

Isolation means that you should not come into contact with other people. It protects your health and the health of others.

Please go and remain at _____ (address) by _____ (date and time).

Based on what we know about _____ , you may need to stay there for up to _____ days. We will be checking in on you and will let you know when it is safe for you to return to your normal activities.

If you have questions or need help, please call _____. Additional information about _____ is available at: _____ (website). Fact sheets about this disease and the steps you should take to protect yourself and others are attached to this letter. Please take these steps to reduce the risk to yourself and others with whom you may have contact.

It is very important that you comply with this request for voluntary isolation.

If you do not comply with this request for voluntary isolation, we may use a detention order, enforced by the police, to assure your compliance.

Thank you for your cooperation and help during this public health emergency.

Medical Officer

(Date and Time)

Supplement D



THE STATE
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Appendix A2: Request for Voluntary Quarantine

Date: _____

Dear _____,

I request that you voluntarily quarantine yourself because you may have, or have been, exposed to _____. I believe this is necessary because: _____.

Quarantine means that you should not come into contact with other people. It protects your health and the health of others.

Please go and remain at _____ (address) by _____ (date and time).

Based on what we know about _____, you may need to stay there for up to _____ days. We will be checking in on you and will let you know when it is safe for you to return to your normal activities.

If you have questions or need help, please call _____. Additional information about _____ is available at: _____ (website). Fact sheets about this disease and the steps you should take to protect yourself and others are attached to this letter. Please take these steps to reduce the risk to yourself and others with whom you may have contact.

It is very important that you comply with this request for voluntary quarantine.

If you do not comply with this request for voluntary quarantine, we may use a detention order, enforced by the police, to assure your compliance.

Thank you for your cooperation and help during this public health emergency.

Medical Officer

(Date and Time)

Appendix B: Home Isolation Assessment Checklist

Section

Name of Person: _____ Date of Birth: _____

Home Address: _____ Cell or telephone number: _____

- | | Yes | No |
|--|--------------------------|--------------------------|
| 1. Do you share common spaces with other families? (For example you live in a apartment, nursing home or assisted living.) Describe: _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Do you live in a house, duplex, or condominium? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Do you have a bedroom or other space for an ill household member? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do you have in your home: | | |
| a) A cell phone or telephone? | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Radio? | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Electricity? | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Computer, internet? | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Water? | <input type="checkbox"/> | <input type="checkbox"/> |
| f) If no water in home, do you have access to clean water? | <input type="checkbox"/> | <input type="checkbox"/> |
| g) Heat? | <input type="checkbox"/> | <input type="checkbox"/> |
| h) Toilet? | <input type="checkbox"/> | <input type="checkbox"/> |
| i) If no toilet, do you have a honey bucket, or outhouse? | <input type="checkbox"/> | <input type="checkbox"/> |
| j) Washer and dryer, or access to a laundry center ? | <input type="checkbox"/> | <input type="checkbox"/> |
| k) Access to a store to purchase food or supplies? | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. How many adults (over the age of 18 years) live in your home? | ____(number) | |
| 6. How many children between the age of 2-18 years old? | ____(number) | |
| 7. How many infants between the age of 1 day-2 years old? | ____(number) | |
| 8. How many household members are unable to care for themselves such as an elder or disabled child? | ____(number) | |
| 9. Do any pregnant women or immunocompromised people live in your house? | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Do you have any pets? | <input type="checkbox"/> | <input type="checkbox"/> |

Please list _____

Section B

- | Do you have a 3-day supply of the following items? | Yes | No |
|--|--------------------------|--------------------------|
| 1. Food for you and the family/household | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Drinking water for you and the household | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Dishwashing soap | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Plastic garbage bags | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Household cleaning supplies | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Medications for yourself and household members | <input type="checkbox"/> | <input type="checkbox"/> |

Supplement D



THE STATE
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Appendix C: Documentation of Release from Isolation or Quarantine

Date: _____

The Alaska Department of Health and Social Services acknowledges that you, _____, have complied with and completed the terms of isolation or quarantine. We recognize the personal hardship you have endured and, on behalf of the Department and your fellow Alaskans, we thank you for the sacrifices you have made during this disease event.

At this point, you are removed from isolation or quarantine with the following restrictions:

- ☐ No restrictions
- ☐ Restrictions: _____

Name of person released from I/Q

Signature

Name of parent or guardian (if the above person is a minor)

Signature

Medical Officer

Signature

Supplement E: Antiviral Management

Antiviral drug management and publicly maintained stockpiles are targeted primarily for treatment of persons with pandemic illness. However, expanding antiviral drug production has allowed limited prophylaxis strategies to be considered. Fully implementing prophylactic antiviral drug strategies will require the establishment of stockpiles by employers in both public and private sectors. The critical infrastructure sector should consider antiviral prophylaxis as part of a comprehensive pandemic preparedness and response plan.¹

The release of the State's stockpiled antivirals is governed by Annex K of the *DHSS EOP*. The SOE Pharmacist will manage the ordering, distribution and accountability of the State's stockpiled antivirals. Notification and documentation of antiviral use will be sent to DHSS EOC by the SOE Pharmacist. Documentation shall include date, lot number, and agency or individual, location, verification that medication information sheets were given and recipients know how to report any adverse effects of the medication.

General Information

- Currently oseltamivir is packaged in cases with 48 bottles (each with 10 capsules)/case. Allotment of antivirals is based on cases, not individual bottles for easier shipping.
- There are 22 Acute Care hospitals in Alaska (excluding military facilities) and 1 isolated clinic in the Aleutian chain.
- Distribution of pre-staged medication needs to consider priorities as defined in this supplement.

Ethical Perspective

Allocation of antiviral drugs that are in limited supply raises ethical issues, but most people recognize that minimizing the harms of an influenza pandemic may require targeting resources to specific groups that protect health and safety and provide essential community services.

Goals

- Mitigate disease, suffering and death.
- Stop, slow, and limit the spread of a pandemic.
- Sustain infrastructure and mitigate impact to essential state services.
- Support health care services in affected areas.

¹ Guidance on Antiviral Drug Use during an Influenza Pandemic: <https://www.hSDL.org/?view&did=32545> retrieved 4-14-2010

- Preposition antivirals for rapid access if funding is available

Assumptions

- Antiviral drug use strategies will be reviewed at the time of a pandemic based on the epidemiology and impacts of the pandemic.
- During a pandemic wave approximately 30% of persons will become ill.
- There is limited surge capacity among the Division of Public Health's doctors, nurses, and laboratorians.
- There is a limited amount of antivirals in the state and additional supplies from the Strategic National Stockpile (SNS) will depend on the extent of the outbreak in the U.S.
- Early treatment of pandemic influenza will decrease severity of illness, thus reducing the number of persons requiring hospitalization, and preventing some influenza-related deaths.
- The need for antiviral prophylaxis may decrease once an effective pandemic influenza vaccine becomes available.
- Early treatment is a more efficient use of antivirals than widespread prophylaxis.
- Guidance for the use of antiviral drugs may differ during a second pandemic wave when many people may be immune because of prior disease or vaccination.
- Receipt, storage and staging of antivirals will be according to the state Emergency Medical Countermeasures Plan and the responsibility of the SOE Pharmacist.
- State stockpiled antivirals will be free of any charge to clients (though private industry may have a fee associated with distribution).

Public Readiness and Emergency Preparedness (PREP) Act, Pandemic Influenza Medical Countermeasures—Amendment, December 9, 2015

"The Public Readiness and Emergency Preparedness Act (PREP Act) authorizes the Secretary of Health and Human Services (the Secretary) to issue a declaration to provide liability immunity to certain individuals and entities (Covered Persons) against any claim of loss caused by, arising out of, relating to, or resulting from the administration or use of medical countermeasures (Covered Countermeasures), except for claims that meet the PREP Act's definition of willful misconduct... Covered countermeasures are any antiviral, any other drug, any biologic, any diagnostic, any other device, or any vaccine used against pandemic influenza A viruses and influenza A viruses with pandemic potential..."

Prepositioning of State Antivirals 2009

The state strategy may change as more antivirals become available and our priorities become less restrictive. Hospitals are expected to dispense their existing inventory of antivirals in accordance with

the priorities set forth in this Supplement. Prepositioning of antiviral medications to hospitals, PHCs and tribal entities has been implemented and is governed by a memorandum of understanding (MOU) between the state and the hospitals and clinics involved. The strategy may also change due to funding or expiring of product.

Prepositioning of antivirals is based on the WHO Phases

WHO raises the phase to 4 (roughly aligned with CDC's initiation phase):

- Deliver antiviral medication to every PHC, 11 tribal entities, and one remote clinic.
- Hospitals should inventory their antiviral stock including state pre-positioned antivirals
- Additional amounts of antivirals will be distributed based on regional populations and available stock, utilizing the State of Alaska Strategic Emergency Medical Countermeasures Plan data. Each facility will designate a contact recipient to ensure proper storage, security and monitoring.

WHO raises the phase to 5-6 (roughly aligned with CDC's acceleration phase):

- Deliver antiviral medication from the tribal entities to communities served within their region as directed by State of Alaska Department of Health and Social Services Emergency Operations Center (DHSS EOC). (Amount based upon local population and available stock, utilizing the Emergency Medical Countermeasures Plan data.)
- Distribution will be coordinated by DHSS EOC in partnership with SEOC, Tribal and local emergency operation centers

Distribution and Resupply of State Owned Antivirals

The state stockpiled antivirals are stored in a secured site from which distributions will be made. Distribution of State stockpiled antivirals is governed by the *DHSS EOP*⁵, Appendix K: Pharmaceutical Management. The Section of Epidemiology pharmacist will manage shipments of state stockpiled antivirals directly to the following entities:

- Tribal Health Corporation Entities
- Retail Pharmacies
- Federally Qualified Health Center
- Selected Health Care Providers and Rural Clinics

Dispensing of Antivirals

Each clinic, hospital, or pharmacy will be asked to maintain documentation of state antiviral use. Documentation must be sent to DPH pharmacists when asked or when ordering resupplies.

Hospitals

- Hospitals/Health Care Providers are expected to dispense antivirals in accordance with the State of Alaska Pandemic Influenza Plan priorities listed below.
- Hospitals/Health Care Providers should not be the dispensing centers for essential workers (or family members).
- Citizens should listen for state and local public information campaigns for instructions concerning influenza triage (e.g., who to contact by phone prior to visiting the hospital/health care provider).
- Requirement for hospitalization and antiviral treatment will be determined on a case-by-case basis.
- Hospitals will communicate the need for additional antivirals through their local EOC or directly to the SEOC if a local EOC does not exist.

Clinics, Pharmacies, and Health Care Providers

- Dispensing of antivirals will be administered by priorities set forth in this Supplement.
- Dispensing will be conducted at the community level through coordination with DHSS, PHC, and the regional/local health care delivery system(s).
- Dispensing assumptions:
 - Dispensing strategies will vary widely throughout Alaska due to population and available resources.
 - A system to report family or individual illness has been created (phone, radio, etc.).
 - DHSS recommends delivery of antivirals to individuals by volunteer or emergency medical mobile teams.
- DHSS will maintain regular contact with PHCs, tribal entities, private practitioners, and local pharmacies to determine status of remaining antiviral inventory. This may be done through traditional reporting by the local authorities to the SEOC or directly to the DHSS EOC.
- Dispensing priorities will be adjusted as inventories are depleted or restocked and epidemiological information becomes available.
- Providers will document antiviral dispensing through VacTrAK or an alternative system.
- Antiviral distribution to PHCs will be guided by Public Health Nursing Internal Policy Number: H1N1 (1) "Release of stockpile Tamiflu from PHC's".
- Alaska is reviewing procedures for pharmacy assistance during influenza pandemic with assessing and dispensing of antivirals.

Adverse Event Reporting

Serious adverse events associated with the use of antiviral drugs for treatment or prophylaxis of novel influenza should be reported to the state Section of Epidemiology (a contact number will be provided). Adverse events may also be reported to the FDA using MedWatch Monitoring Program. Hospitals and clinics should download the MedWatch forms available at <http://www.fda.gov/medwatch/>. Adverse events are collated and analyzed by FDA's Adverse Events Reporting System (FAERS).

Priorities and use of State Stockpiled Antivirals

State stockpiled antivirals are intended to meet three needs; treating uninsured or under insured populations, public health measures such as outbreak control, and stop-gap measures if routine supply channels breakdown. State stockpiled supplies can be authorized for use by the DHSS Chief Medical Officer or the DHSS EOC for the following:

1. Treatment of all persons who may benefit from therapy based on assessment of medical need.
2. Initial pandemic outbreak containment/control (Post exposure prophylaxis (PEP) and targeted prophylaxis to slow pandemic spread).
3. Post exposure prophylaxis for essential workers in the health care and emergency services sectors, and individuals critical to the provision of essential services where their absence during a pandemic would jeopardize the delivery of those services.

Final prioritization for treatment and prophylactic use of antivirals will depend on drug availability, clinical and virologic characteristics of the novel influenza, and CDC recommendations. Directions for antiviral use will be issued in the form of a Health Alert.

Private Sector Stockpile Use Priorities

1. Outbreak pre-exposure prophylaxis for workers with high-risk exposure
2. Post exposure prophylaxis (PEP) for exposure of other workers
3. Persons who are severely immunocompromised

State of Alaska Allocation of Antivirals

Assumptions (Population estimates from <https://www.census.gov/quickfacts/>):

- U.S. population 2018: 327,167,434
- Alaska population estimate 2018: 737,438

Conversion Factors from HHS 2017 guidelines:

- Clinical disease attack rate will be 20% to 30% of overall population
- Up to 50% who become ill will seek outpatient medical care
- 35% of select priority groups will get infected

Alaskans Who Would Need Antivirals:

- | | | |
|---------------|-------------------|---------------------|
| • Treatment: | estimate: 162,000 | (22% of population) |
| • Prophylaxis | estimate: 59,000 | (8% of population) |
| • TOTAL | 221,000 | (30% of population) |

Supplement F: Vaccine Management

Vaccine Goals and Objectives

Response Goals

1. Reduce morbidity and mortality during an influenza pandemic
2. Minimize disruption to society and the economy by preserving essential functions

Vaccine Objectives

- Protect workers who are at greater risk of infection due to their job
- Protect those who are essential to the pandemic response
- Protect those who maintain essential community services
- Protect children
- Maintain homeland and national security
- Vaccinate all persons in Alaska who choose to be vaccinated

Based on these goals, the State of Alaska has utilized the U.S. Health and Human Services' *Guidance on Allocating and Targeting Pandemic Influenza Vaccine* to develop a plan to use pre-pandemic and pandemic vaccine when it becomes available. The plan must be flexible to accommodate changes in vaccine technology and the characteristics of pandemic illness and risk groups for severe disease – factors that will remain unknown until a pandemic actually occurs.

Assumptions

- The specific strain of influenza that causes a pandemic will not be known until it occurs.
- In past pandemics, groups at increased risk for serious illness and death have differed by age and health status. Because high risk groups in the next pandemic are not known, this plan will be reassessed and may be modified at the time of the pandemic.
- The U.S. Government is supporting development of new vaccine technologies to allow production of enough pandemic influenza vaccine for any person in the United States who wants to be vaccinated within 3-6 months of a pandemic declaration. Until this goal is met, effective allocation of vaccines as they become available will play a critical role in preventing influenza and reducing its effects.
- Multiple doses of vaccine may be needed for every person and antigen/ adjuvant combinations may need to be matched between doses. Ensuring appropriate dosing intervals and antigen/ adjuvant matching will require use of VacTrAK, Alaska's Immunization Information System.

- The goal is to vaccinate at least 80% of the population with at least two doses of pandemic vaccine 21 days apart within 12 weeks of widespread vaccine availability.
- Vaccination will be only one of several tools used to fight the spread of influenza during a pandemic. Other public health approaches include the use of antiviral medications and non-pharmaceutical measures. These strategies will be the initial mainstay of a pandemic response before vaccine is available and will continue to be important tools throughout the pandemic.

Groups to Receive Influenza Vaccine

Based on the above objectives, the entire U.S. population has been assigned to one of 4 categories. Each category includes specific target groups that are defined based on their occupation or, for the general population, by their age and health status. Target groups are vaccinated in tiers, with all groups in a tier vaccinated simultaneously unless vaccine supply is so limited that sub-prioritization is needed (See Table 1). Changes in this allocation may be made at the time of a pandemic based on the impact of the pandemic and the specific needs identified at that time.

Tier 1 includes the highest priority groups in each target group and is the same across all pandemic severities (See Table 2). It may be necessary to sub-prioritize vaccination of groups included in Tier 1 due to short supply of vaccine at the start of a pandemic (See Table 3). Tiers 2 through 5 will differ depending on pandemic severity. When vaccination has been completed for all five tiers, at any pandemic severity, everyone in Alaska will have had the opportunity to be vaccinated. The state will follow the recommendations of HHS. Complete descriptions of group levels and rationale for the prioritization scheme for each group are available at: <https://www.cdc.gov/flu/pandemic-resources/pdf/2018-Influenza-Guidance.pdf>

Vaccine Locations in Alaska

Vaccine will be distributed to 22 Alaska hospitals, 1 isolated clinic in the Aleutian chain and Alaska Public Health Centers, including the Municipality of Anchorage Health Department and investigation support personnel within the Alaska SOE, Laboratories, and Public Health Nursing. In addition, depending upon vaccine availability and national guidelines during the pandemic, vaccine may be distributed to the private sector medical community, including pharmacies.

Each location will be responsible for verifying that a person presenting for vaccine is in the appropriate group and tier. Because not all vaccine will arrive at one time, the DHSS EOC may direct the facilities to use the sub-prioritization of Tier 1 plan in administering the vaccine. Where possible, facilities should identify these job classes in advance.

Vaccine Management

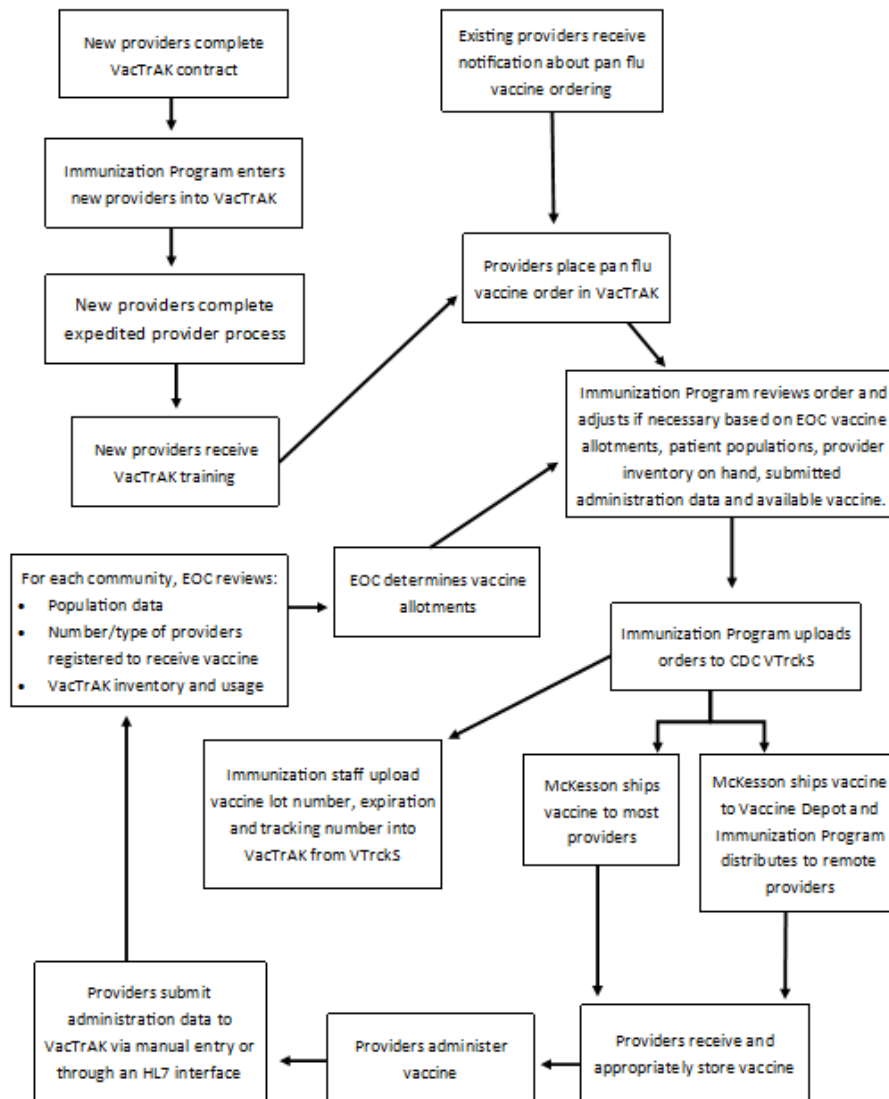
Each vaccinating facility will be required to report vaccine inventory and use through a system (e.g., VacTrAK) designated by DPH. Reporting requirements and mechanisms will be finalized and announced at the time of the pandemic, prior to vaccine distribution.

During a pandemic, appropriate security measures will be implemented to ensure safeguards for the vaccine and for the personnel involved. Vaccine will be shipped from the distributor straight to the providers. If the distributor is unable to ship to any remote location, the vaccine may be shipped to [REDACTED] and will be stored at [REDACTED] until it can be shipped to the provider. If the amount of vaccine exceeds storage capacity at [REDACTED], the excess vaccine will be stored at [REDACTED], which has a large storage unit. Data loggers will be utilized to monitor vaccine temperatures. Local preparedness staff would be responsible for vaccine security after it arrived in their jurisdiction.

Vaccine Distribution

During the H1N1 response, Alaska developed a unique vaccine distribution process (Figure 1) by contracting with a distributor experienced in shipping cold sensitive materials throughout the state. A similar process may be used and/or modified at the time of an actual event. Additional information about the distribution of vaccines can be found in Annex F of the *DHSS EOP*.⁵

Figure 1. Pandemic Vaccine Distribution, Alaska (example updated from distribution of 2009-2010 Monovalent H1N1 Vaccine).



Vaccine Adverse Event Reporting System (VAERS)

All patients are to be provided with appropriate Vaccine Information Statements (VIS). Certified immunization providers receiving state-supplied vaccine must follow federal guidelines to report adverse events following vaccination to the VAERS program.

Alaska has designated PCN 06-1037 (Nurse Consultant II in the Immunization Program) as the state's Vaccine Safety Coordinator. The VAERS Coordinator is PCN 06-1568 (Nurse Consultant I in the Immunization Program). This person is part of the National VAERS coordinator network and will apply to the Immunization Safety Office to receive a secure certificate to access VAERS data. Both PCNs attend teleconferences and meeting held by CDC related to pandemic influenza vaccine administration and safety.

Monitoring for vaccine adverse events will be necessary and could build upon the infrastructure now in place via the traditional VAERS (Vaccine Adverse Event Reporting System) process, through which providers report directly to the VAERS contractor at the national level and the state subsequently receives feedback. Alaska will continue to work with the national VAERS system to assure appropriate information reported to VAERS is shared with the state's Vaccine Safety Coordinator in a timely fashion. If information on adverse events is required faster than is possible with VAERS, other data systems (e.g., syndromic surveillance) or data collection (e.g., a hotline for providers and the public) may be initiated.

Supplement F

Table 1. Category, vaccination population groups, estimated number in population group, and tiers for low, moderate, and high/very high pandemic severity.

From <https://www.cdc.gov/flu/pandemic-resources/pdf/2018-Influenza-Guidance.pdf>, retrieved May 7, 2019.

| <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="width: 30px; height: 15px; background-color: red; border: 1px solid black;"></div> TIER 1¹ <div style="width: 30px; height: 15px; background-color: orange; border: 1px solid black;"></div> TIER 2 <div style="width: 30px; height: 15px; background-color: yellow; border: 1px solid black;"></div> TIER 3 <div style="width: 30px; height: 15px; background-color: green; border: 1px solid black;"></div> TIER 4 <div style="width: 30px; height: 15px; background-color: blue; border: 1px solid black;"></div> TIER 5 <div style="width: 30px; height: 15px; background-color: white; border: 1px solid black;"></div> Not Targeted² </div> | | | | | |
|--|---|-------------------------------|---------------------------|-------------------|-------------------------|
| Category | Population Group | Estimated Number ³ | Low Severity ⁴ | Moderate Severity | High/Very High Severity |
| Homeland and national security | Deployed ⁵ & mission essential personnel | 850,000 | | | |
| | Essential military support & sustainment personnel | 650,000 | | | |
| | Intelligence services | 150,000 | | | |
| | National Guard personnel | 500,000 | | | |
| | Other domestic national security personnel | 150,000 | | | |
| | Other active duty military & essential support | 1,500,000 | | | |
| Health care and community support services | Public health personnel | 300,000 | | | |
| | Inpatient health care providers | 3,200,000 | | | |
| | Outpatient & home health providers | 2,600,000 | | | |
| | Health care providers in long-term care facilities | 1,600,000 | | | |
| | Pharmacists & pharmacy technicians | 725,000 | | | |
| | Community support & emergency management | 600,000 | | | |
| | Mortuary services personnel | 50,000 | | | |
| | Other health care personnel | 350,000 | | | |
| Other critical infrastructure | Emergency services & public safety sector personnel (EMS, law enforcement, & fire services) | 2,000,000 | | | |
| | Manufacturers of pandemic vaccine & antivirals | 50,000 | | | |
| | Communications/information technology (IT), electricity, nuclear, oil & gas, water sector personnel, & financial clearing & settlement personnel | 2,200,000 | | | |
| | Critical government personnel - operational & regulatory functions | 425,000 | | | |
| | Banking & finance, chemical, food & agriculture, pharmaceutical, postal & shipping, & transportation sector personnel (critical infrastructure with greater redundancy) | 3,400,000 | | | |
| | Other critical government personnel | 400,000 | | | |
| General population | Pregnant women | 4,000,000 | | | |
| | Infants & toddlers 6-35 months old | 11,000,000 | | | |
| | Household contacts of infants <6 months old | 4,500,000 | | | |
| | Children 3-18 years old with high risk condition | 7,000,000 | | | |
| | Children 3-18 years old without high risk condition | 62,000,000 | | | |
| | Adults 19-64 years old with high risk condition | 38,000,000 | | | |
| | Adults ≥65 years old | 41,000,000 | | | |
| | Healthy adults 19-64 years old | 132,000,000 | | | |

NOTES: (See Appendix A for description of Population Groups)

¹Across categories, vaccine will be allocated and administered according to tiers where all groups designated for vaccination within a tier have equal priority for vaccination.

Groups within tiers vary depending on pandemic severity. Tier 1 is the highest priority group to receive vaccination if there is limited vaccine supply for any pandemic severity.

²Persons not targeted for vaccination in an occupational group would be vaccinated as part of the General Population based on their age and health status.

³Estimates rounded to closest 50,000. Occupational population group sizes may change if worker populations fluctuate or as plans are developed further and population groups may change in number over time.

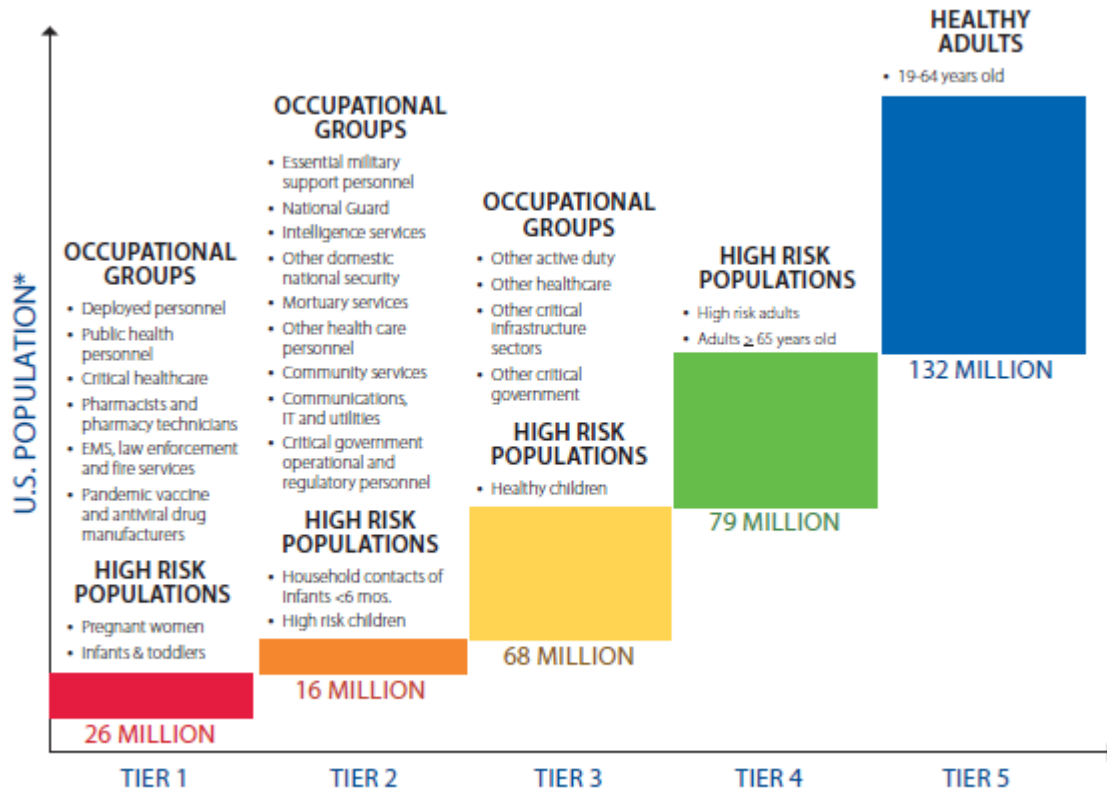
⁴ACIP recommendations for prioritization would guide tiered vaccination during pandemics with low to moderate levels of severity.

(<http://www.cdc.gov/vaccines/hcp/acip-recs/index.html>).

⁵Includes military forces and other mission critical personnel, not limited to active duty military or US government employees, who are critical to protecting national security.

Figure 2. Vaccination tiers and population groups for a high/very high level of pandemic severity.

From <https://www.cdc.gov/flu/pandemic-resources/pdf/2018-Influenza-Guidance.pdf> , retrieved May 7, 2019.



* Based on 2015 U.S. population of 321 million people. <https://factfinder.census.gov/bkmk/table/1.0/en/PEP/2015/PEPAGESEX>

Table 2. Prioritization of vaccination groups within Tier 1 based on availability of vaccine supply.

From <https://www.cdc.gov/flu/pandemic-resources/pdf/2018-Influenza-Guidance.pdf> , retrieved May 7, 2019.

| Vaccine in short supply (Sufficient to vaccinate all of Tier 1) | Vaccine in extremely short supply (Insufficient to vaccinate all of Tier 1) |
|--|--|
| <p>All groups would be offered vaccine at the same time:</p> <ul style="list-style-type: none"> • Deployed and mission critical personnel • Critical healthcare (inpatient, outpatient, long-term care, pharmacists, pharmacy technicians) • Public health personnel • Emergency Medical Services (EMS) • Law enforcement • Fire services • Manufacturers of vaccine and antivirals • Pregnant women • Infants and toddlers | <p>Proposed ranking of groups within Tier 1:</p> <ol style="list-style-type: none"> 1. Front-line inpatient and hospital-based health care personnel caring for sickest persons; health care personnel with highest risk of exposure 2. Deployed and mission critical personnel who play essential role in national security 3. Front-line EMS 4. Front-line outpatient health care personnel, pharmacists and pharmacy technicians, and public health personnel who provide immunizations and outpatient care 5. Front-line law enforcement and fire services personnel 6. Pregnant women and infants aged 6 -11 months old 7. Remaining groups in Tier 1 (includes other Tier 1 inpatient and outpatient healthcare personnel not vaccinated previously; public health; EMS, law enforcement, and fire services personnel; manufacturers of pandemic vaccine and antiviral drugs; and children aged 12-35 months old) |

Summary

Receipt

1. McKesson will ship vaccine directly to most providers.
2. For remote providers, McKesson will ship vaccine to [REDACTED], and the Immunization Program will distribute to the remote providers.
3. Vaccine lot number and expiration date will be populated in VacTrAK through file uploads from CDC's VTrckS.

Shipment

1. McKesson will ship vaccine directly to most providers.
2. Vaccine will be shipped to the remote providers in accordance with Standard Operating Procedures of the Alaska Immunization Program or alternate procedures developed at the time of the pandemic
3. Unless a new plan is developed in response to specific conditions at the time of the pandemic, shipments will be supplied to PHCs and hospitals, followed by local clinics.
4. Communities will be expected to provide necessary security and may ask for assistance from the SEOC.

Staffing

1. SOE staff

Vaccine Monitoring

1. Providers are required to submit administration data to VacTrAK via manual entry or HL7 interface within 14 days of administration.
2. The Immunization Program will monitor available vaccine and vaccine shipments using VacTrAK and CDC's VTrckS.

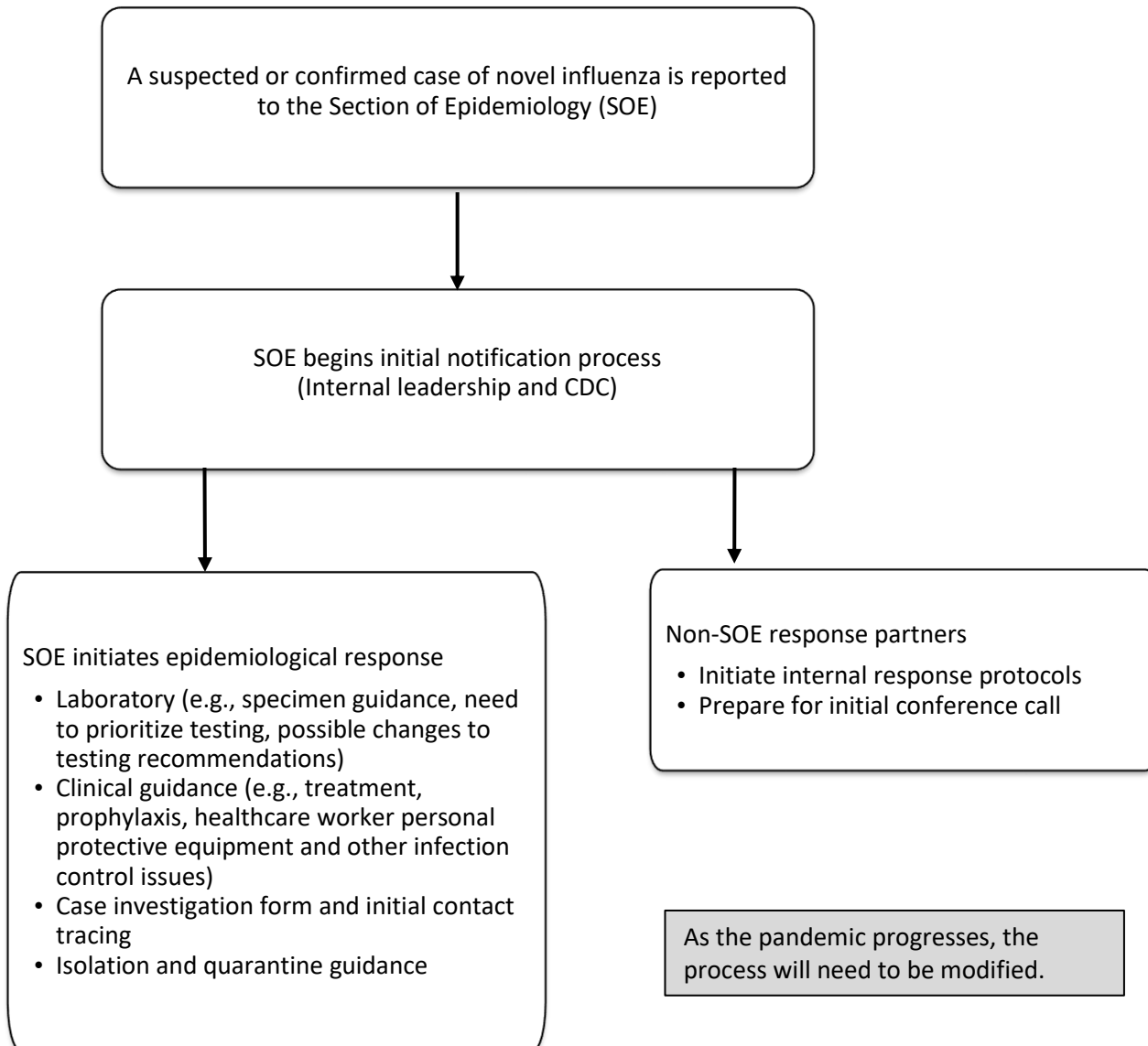
Vaccine Allocation

1. Unless a new plan is developed in response to specific conditions at the time of the pandemic, vaccine will be allocated based on a pro rata (population) basis and usage.
2. In addition, allocation of vaccine will include consideration of FTEs in 22 Alaska hospitals, 1 isolated clinic in the Aleutian chain and Public Health Centers, including the Municipality of Anchorage Department of Health and Human Services.
3. Local communities are to identify their public health emergency response workers who are critical to the pandemic response.

Supplement G: Pandemic Influenza Notification Protocol

For first suspected or confirmed human cases of a novel influenza strain in Alaska

Summary



Assumptions

- Reports of notifiable conditions and unusual infectious disease events are reported to the SOE Infectious Disease Team.
- The SOE and Section of Laboratories provide guidance for specimen submissions for novel strains of influenza for testing at the ASVL.

- The Section of Laboratories performs all in-state testing for novel influenza on specimens collected from humans with ILI.
- Confirmatory laboratory testing is done at the CDC or other approved out-of-state laboratory.

Possible Scenarios

Scenario #1: A patient is suspected to have illness caused by a novel strain of influenza:

- The SOE receives a report of a suspect case of novel influenza from an in-state health care provider.
- An epidemiologic investigation of the report confirms that the suspected case meets the CDC and/or WHO case definition.
- Laboratory testing at the ASVL or other laboratory is pending.

Scenario #2: Positive laboratory test of a novel influenza is reported

- A clinical specimen is submitted directly to ASVL and is found to be non-subtypable. The specimen is a preliminary positive. The CDC or other approved laboratory then confirms a preliminary positive test and reports to the DPH. Clinical and epidemiological data support that it is a novel strain.
- An out-of-state laboratory reports a positive test from an Alaska resident or person who may have been infected while in Alaska.

Notification

Scenario 1 or 2 is reported to the Section of Epidemiology ID Team

The SOE Infection Disease Team will notify:

- The State Epidemiologist

The State Epidemiologist will notify:

- DPH Director
- DHSS Chief Medical Officer
- DPH Chief of Public Health Nursing
- DPH Chief of RCHS
- DHSS Public Health Information Officer
- CDC

The State Epidemiologist will ensure these additional actions are taken:

- Preparation of an initial situation report about investigation.
- Supervise the preparation and distribution of an AK-PHAN for healthcare providers and press release for the general public.
- Supervise the preparation and distribution of additional guidance and Epidemiology *Bulletins*.

The Director of the Division of Public Health will notify:

- DHSS Commissioner
- DHS&EM

The DHSS Commissioner will notify:

- Governor's Office: Special Staff Assistant and Deputy Chief of Staff

DHSS EOC Incident Commander (or other HERO staff member as appropriate):

- Convene a DHSS EOC Planning teleconference (DPH Director; Chief Medical Officer; Section Chiefs for Epidemiology, Public Health Laboratories, Public Health Nursing, and Rural and Community Health Systems)
- Notify the SEOC, 907-428-7100

Public Communication Scenarios

The general public communication response is noted below. For more specifics regarding the public communication response plan, see Annex B of the *DHSS EOP*.

The first human cases detected in Alaska:

In the event that either a presumptive positive or confirmed positive case is reported, Section of Epidemiology staff will provide the facts of the case to the DHSS EOC Public Information Officer, who will prepare appropriate press materials and begin media event planning. The draft press release will be routed for approval using existing channels and disseminated accordingly.

Additional human cases:

As new cases are reported, regular updates will be provided and released to the news media on a regular basis.

Supplement H: Planning Resources

Coordination between state and local pandemic influenza plans is critical to assure effective implementation of response activities and delivery of quality medical care in the context of increased demand for services. The following resources can be used to help local emergency planners identify areas that need to be addressed in the development of a community pandemic influenza plan.

1. NACCHO influenza information:
<https://www.naccho.org/programs/community-health/infectious-disease/influenza>
2. CDC State and Local Government (Pandemic Influenza) Planning:
<https://www.cdc.gov/flu/pandemic-resources/planning-preparedness/state-local-government-planning.html>
3. ASTHO Pandemic Influenza:
<http://www.astho.org/Programs/Infectious-Disease/Pandemic-Influenza/>
4. WHO checklist for influenza pandemic preparedness planning:
<https://www.who.int/influenza/resources/documents/checklist/en/>